ABRIDGED REPORT OF

The Lumleian Lectures

ON THE

STRUCTURAL DISEASES OF THE HEART CONSIDERED FROM THE POINT OF VIEW OF PROGNOSIS.

By W. H. BROADBENT, M.D., F.R.C.P. Lond.

LECTURE II.

Dilatation (*Symptoms*).—The symptoms which attend the earlier stages of dilatation are extremely varied and very vague. An imperfect and fluctuating supply of blood to the brain will give rise to impairment of bodily and mental energy and to irresolution and vacillation of purpose; the memory is liable to fail, especially in regard to recent events and the power of sustained attention and consecutive thought is diminished. The frame of mind will often be despondent and the temper may be irritable; there may be attacks of giddiness or faintness; sleep is usually disturbed and sometimes almost absent, and, whether the nights are good or bad, there may be sopor at any period of the day, the patient dropping off to sleep even over his morning news, paper. For the same reason, the irregular and imperfect blood-supply and the back pressure in the veins, digestion and the action of the liver will be deranged. The appetite is usually bad, and food is followed by discomfort and by flatulent distension, which latter, again, reacts on the heart and gives rise to oppression, or palpitation, or irregular action. The bowels are generally torpid. The urine is usually deficient in amount and high coloured, and there is often an habitual deposit of urates. Turbidity of the urine day after day, whatever the food and drink, or weather, or mode of life, should direct attention to the state of the circulation. There is no one, and scarcely any combination, of the symptoms enumerated, however, which may not occur independently of weakness and dilatation of the heart, especially in states of system attended with high tension, and it would be waste of time to attempt to disentangle those directly due to the state of the heart from those which are merely accidentally associated with it.

The special symptom which calls attention to the heart as the probable starting-point of a number of ailments is breathlessness on slight exertion; but even this may be produced by other causes—by anæmia, for example. After middle life pernicious anæmia may often give rise to extreme breathlessness, which may excite a suspicion of heart disease. High arterial tension alone which has not yet given rise to dilatation, simple debility, very sedentary habits, may also cause great shortness of breath. These facts are mentioned in order to warn against a too-ready inference that heart disease exists simply because the breath is short. A sense of breathlessness coming on during repose, and inciting the patient to make frequent deep inspirations, is usually a symptom of nervous depression, and has no necessary relation to heart disease. For the most part, as the disease advances symptoms arise which are indicative of back pressure in the systemic veins—a gradually advancing œdema, and the like. But the problems which come before us in the prognosis of dilatation of the heart will best be elucidated by discussing them as they present themselves at different stages of the disease, and we may first take the fully developed effects. The patient is dropsical, œdema invading the thighs, loins, and abdominal parietes, as well as the legs, and there may be fluid in the abdomen, and perhaps in one or both pleural cavities. The feet and legs will be cold and pale, or purple and livid, especially if hanging down. The hands also will be cold, and are often crimson or purplish, and the nails of a deep or dusky instead of a bright pink. A white patch on the hand produced by pressure is very slowly invaded by returning colour. The urine will be scanty, of a deep colour, and probably high specific gravity. It most commonly throws down a copious deposit of brickdust lithates, and it may contain albumen. The appetite will be very bad, and frequently there are intolerable nausea and disgust for food; the tongue will probably be furred and flabby; the bowels constipated or irregular.

One of the most distressing symptoms is sleeplessness, and when, after hours of weary shifting of position, the sufferer is overcome by fatigue and drops off, he has painful dreams, and wakes suddenly in a fright with a dreadful sense of suffocation for lack of voluntary help to his respiration. The longest and best sleep will be obtained while sitting in a chair, and sometimes by day rather than in the night. The patient is probably unable to lie down in bed, and is propped up by pillows, or he must have his legs down, and therefore spends day and night seated in his chair. Remarkable exceptions, however, are met with in this respect, some sufferers, while extremely ill, being able to lie down without distress. The face is pale, and perhaps puffy, with injected capillaries over the cheeks, and wears an expression of distress, and the eyes are watery. The lips are pale or bluish. The breathing is more or less laboured, even in repose, and the sufferer constantly supplements his reflex respiration by voluntary deep breaths. When he speaks it is in fragmentary sentences, and with evident effort and aggravation of the respiratory distress. The least movement brings on shortness of breath, which is often painful even to witness. The pulse is frequent, irregular, and probably greatly deficient in tension, but not always. Pursuing the examination, the jugulars will be found full, but not as a rule greatly distended or pulsating forcibly. The liver will be enlarged, coming down sometimes as low as the umbilicus, and extending across the epigastrium into the left hypochondrium. It will often be jogged by the right ventricle, but does not usually exhibit the true expansile pulsation. There may be fluid in the peritoneal or pleural cavities, more commonly not, and there may be physical signs of œdema and congestion of the lungs, or the percussion note may be good and the entry of air free and unattended with adventitious sounds of any kind to the very base of both lungs. The physical signs of dilatation, as already described, show that this is the condition underlying the symptoms of embarrassment of the circulation. We are called upon to answer the question, Has the patient a chance of recovering from the condition described, or will he die?

The first element in the judgment to be formed will be the urgency of the symptoms, and special importance will attach to two of the series—the nausea and loss of appetite and the sleeplessness—from the effects which they have on the patient's strength. Frequent vomiting of food is of very grave import, not only because the patient does not get the benefit of the nourishment, but because it shows that the stasis in the abdominal circulation has reached a point which interferes seriously with the digestive secretions. Attacks of faintness and extreme exhaustion, or of severe dyspnœa, are also very serious. An observation is here necessary. It is not always when the dropsy is excessive that the patient's condition is worst. From the late appearance or entire absence of dropsy in fatty degeneration of the heart in aortic disease and mitral stenosis it would appear that a certain degree of pressure in the arterial system is required to coöperate with the back pressure in the venous system for the full development of dropsical effusion; and when the œdema remains moderate in amount, while other symptoms, such as breathlessness, faintness, and great muscular weakness, the latter especially, indicate great cardiac inefficiency, it may be because the left ventricle propels the blood with very little force. A frequent, short, and unsustained pulse and heart beat without much œdema may thus indicate a more grave condition than extreme dropsy; long-continued great frequency of the pulse is an unfavourable sign. The urgency of the symptoms being about the same, a greater degree of dilatation, as indicated by a more extended area of dulness, displacement, and especially greater diffuseness and weakness of the apex beat and impulse, and greater shortness of the first and weakness of the second sound, will add gravity to the prognosis, and it will be borne in mind that approximation of the first and second sounds is always a very serious indication. A favourable point in the physical examination will be a good right ventricle impulse, and it has appeared to me that there is a greater margin for treatment when the liver is considerably enlarged.

When the symptoms and physical signs have been well weighed, the first question to be asked in view of prognosis is whether there has been any adequate exciting cause of the symptoms. If there has been recognisable over-

exertion or excitement or grave anxiety—any mental or bodily strain—or if there has been a chill, giving rise to bronchitis or other affection of the lungs, or deranging seriously the liver and digestive organs, it may be hoped by means of rest and treatment to undo the ill effects and restore the balance. If, on the other hand, the symptoms have crept on gradually without traceable cause of the kind mentioned, and especially when due care has been exercised, and there has been no habitual error in regimen or neglect of bowels, the probabilities are that the symptoms are the outcome of conditions which cannot be reversed, of radical inherent weakness of the heart. The previous mode of life, active or sedentary, careful or imprudent, and especially the patient's habits with regard to alcoholic stimulants, will have a very important bearing on the probable issue of the attack, as will also his general soundness, and the absence or existence of disease of any other important organs, especially the kidneys and liver. The patient's cheerfulness, hopefulness, and courage under his sufferings, or his despondency, will make powerfully for or against him, not only as direct influences, but because the state of mind is often an index of the state of the system.

Another inquiry of great prognostic weight will be as to the patient's family history. It is through this that we obtain an idea of his vital tenacity and of the trustworthiness of his tissues, and sometimes of the special liabilities of his heart. There are few tendencies which run more strongly in families than those which are manifested in the heart and vascular system, whether to high arterial tension with the effects on the vessels and heart which follow from this, or to dilatation and weakness, or to degeneration; and a prognosis, otherwise not unfavourable, might have to be instantly revised on learning that the father and an uncle or two, or a brother, had died at about the patient's age from heart disease. Finally, the response to treatment will speedily afford an indication of the utmost value, and this may be described at once.

Treatment.—We have to deal at the same time with defective propulsive power on the part of the ventricle and damming back of blood in the venous system, and the indications are to relieve the ventricles of work and increase the vigour of their action, and at the same time to deplete the venous engorgement. Now when the heart is weak, as it is here, it is much more important to relieve it of work than to try to lend it vigour. We can do much more in one direction than in the other, and we are more sure of our result. Without first diminishing the resistance in the circulation, to stimulate the heart to more energetic contraction may only cause it to give way and dilate further. This last object must indeed be taken first. We must undo the effects as a means of reaching the cause, a course we are often compelled to take in therapeutics.

Venesection, the most effectual means of relieving the right side of the heart, is very rarely applicable in dilatation. It is conceivable that under some pulmonary complication, resulting from chill, the engorgement of the right auricle and ventricle might be such as to make bloodletting the less of two dangers; but the initial fault being weakness of one or both ventricles, we cannot trust the heart to adjust itself to a rapid change of any kind, and the right ventricle may not be in a condition to take advantage of the relief afforded it. Usually, however, the venous engorgement is developed slowly, and the indications for venesection do not arise. The application of six or eight leeches over the liver is safer, and it will usually effect all that can be done by direct abstraction of blood. The indication for this local bleeding is enlargement of the liver, and when this is considerable it rarely fails to afford striking relief. Very frequently, for example, the patient who has previously been tortured by sleeplessness will sleep at once, and sometimes for a night or two afterwards. The reason for selecting the hepatic region for the application of the leeches is simply that pain and tenderness felt there are relieved; it is not supposed that blood is drawn from the liver, or that the same amount abstracted elsewhere would not be equally efficacious. The leeches will be followed by a hot poultice, which, besides encouraging the bleeding, will bring blood to the surface. When the liver is not enlarged, and especially if the right ventricle sounds and impulse are weak, there is no advantage to be gained by leeching.

Concurrently with the application of leeches a purgative will be given, which will deplete the portal system at the same time with the systemic veins. Afterwards this will be the principal means of keeping down the venous engorgement. In a large majority of cases, indeed, we have to depend entirely upon purgatives for these purposes, as abstraction of blood by any method is inadmissible. It is not a matter of indifference what purgatives are employed. The object of a purgative is not simply to carry off as much fluid as possible, and so drain the tissues. This may be the case, perhaps, in ascites from cirrhosis of the liver, but in heart disease of any kind, and especially in dilatation, much more is to be gained by rectifying the balance of the circulation, when the kidneys will resume their function and remove the excess of liquid. Purgatives, then, may be made to contribute to this; and before considering them further we must refer to the first object of treatment—the relief of the heart from work and the increase of its vigour. Of these, we can be much more sure of the first than of the second; we can more easily and certainly diminish the resistance in the arterioles and capillaries than we can lend strength and efficiency to the action of the heart, and, without removing the obstruction in the peripheral circulation, it might only do harm to incite the heart—weakened as its structures are—to greater effort to overcome it. Now, mercurial purgatives have this effect of diminishing arterio-capillary resistance and of lowering arterial tension, and therefore of relieving the heart. The hypothesis by which, as it seems to me, this observed fact is best explained is that mercury influences the liver chemistry and promotes the elimination of impurities which when retained in the blood give rise to resistance in the capillaries. But, whatever the explanation, the fact that the arterial tension is notably lowered by mercurial aperients is confirmed by daily experience, and it is remarkable how frequently the statement recurs in works on heart disease that other remedies often fail to act until a dose of calomel or other mercurial preparation has been given.

Mercurial purgatives, then, have the double effect of depleting the portal system, which relieves the engorgement of the liver and the distension of the right side of the heart, and of diminishing the resistance in the peripheral circulation, and so relieving the left ventricle of stress. Very commonly the best of testimony as to the beneficial character of the result is given by refreshing sleep. The disadvantage, if such it be, that less fluid is carried off than by hydragogue cathartics is often compensated by an increased flow of urine; and elaterium, gamboge, jalap powder, and the like, when repeated give rise to great exhaustion. Calomel, then, or blue pill, or grey powder should be given in doses of from one to five grains, according to the urgency of the case, with colocynth and hyoscyamus, or rhubarb, followed by some mild saline. After one or more full doses at the outset a moderate dose may be given every second or third night. The acid tartrate of potash will often coöperate beneficially both by its action on the bowels and on the kidneys. The heart being relieved of work, may be urged to more vigorous contraction by digitalis, strophanthus, spartein, squills, caffeine, convallaria, apocynum—the special heart tonics,—with which strychnine may usually be combined with advantage. In a case of extreme suffering digitalis may be given with ammonia, ether, and nux vomica; in the more chronic stages with iron, and perhaps strychnine. Sometimes an effect can be obtained by giving citrate of caffeine in a pill at the same time with digitalis in a mixture when singly neither seems to be efficacious. Squills, again, may be given with digitalis, as in the well known pill with mercury, or in some liquid combination. Next to digitalis stands strophanthus, which is a most valuable alternative when digitalis seems to produce sickness, as is sometimes the case, or when it fails to exercise a favourable influence on the heart. Sulphate of spartein I have seen to be of great service when digitalis and strophanthus appeared to have exhausted their influence; of convallaria I have little to say. Apocynum has in one or two cases seemed to carry off dropsy in a remarkable way, but one patient died suddenly when apparently just well. It is not necessary to go into greater detail with regard to these remedies. Throughout a case of the kind the medical man has to fight, so to speak, with both hands, and continuous watchfulness will be necessary to meet the vicissitudes which occur, and many changes in method may be required while the same principles are held in view.

The prognosis, as has been said, will be greatly influenced by the response to treatment. This will be energetic, especially in the matter of purgatives, in proportion as the symptoms are urgent, and if no favourable effect is produced the prospect of recovery is very poor.

Very commonly improvement takes place up to a certain point and then progress seems to stop, to come to an end. This is a trying stage both to the patient and to the medical man. Changes of remedies and new combinations must be tried both in regard of the aperient and of the tonic, not frequently and capriciously, but with careful study of the results and due allowance of time for obtaining them. Sometimes it does good to suspend all medicines for a few days and start afresh. Under these circumstances, again, it may be of the greatest service to drain away the fluid from the legs, even when the extent of the œdema is not such as actually to call for it. The good result of removing an ascitic accumulation, should this be present, may be still more striking. Even a moderate amount of effusion in the pleural cavity, such as we should not think of dealing with under ordinary circumstances, should be aspirated. A straw may turn the balance either way, and a very slight obstacle may prevent the heart from regaining control over the circulation. It is not always desirable to postpone the removal of fluid till the particular conjuncture described arrives; it may be an urgent necessity at a very early period. Usually, however, it is prudent to give remedies a chance before resorting to puncture or paracentesis. As regards the method of drainage to be employed, whether for œdema or ascites, but particularly in case of ascites, Southey's tubes are in my opinion much the best.

The feeding of the patient through the long course of treatment will be a task of extreme difficulty. We have to contend with nausea and distaste for food amounting to disgust; sometimes the sufferer positively cannot swallow anything requiring mastication. The object to be held in view is to keep down the volume of the blood while maintaining its quality. A small amount of solid or semi-solid food should be taken about every three hours. When the patient is not too ill to take his meals at the accustomed time, it is a great encouragement to him to be allowed to do so, and he may then eat what he can of fish, fowl, tender meat, game, milk pudding, &c. When the amount is small, the regular meals may be supplemented by intermediate nourishment, such as beaten-up egg, a little milk, or perhaps a small cup of strong soup or beef-tea, or a little beef or chicken jelly or meat extract. Soups and jellies have the disadvantage of containing little proteid and much liquid, but they are stimulants to the flagging heart. Potted meat sandwiches are a great resource, and the pulp of raw beef-steak can be given in this form, disguised by cooked meat or concentrated gravy. A German physician of my acquaintance tells me that he frequently feeds his patients suffering from cardiac dropsy of the kind under consideration entirely upon raw ham, and has great success. The amount of fluid must be restricted as far as possible, especially that taken with food. Stimulants are usually imperatively necessary, but should be kept within limits known and defined by the medical man. The patient is under a great temptation to resort to them for the relief of faintness, exhaustion, and nausea. Cream of tartar drink may be taken to quench thirst between meals, and in some cases a copious draught of hot water once or twice a day will run through the system rapidly and wash out the tissues without augmenting permanently the volume of blood or adding to the dropsy. When this is tried, it must be ascertained definitely that the amount of urine is correspondingly increased.

A question which arises in almost every severe case is whether the patient must be urged to remain in bed or allowed to get up. Bed is undoubtedly the best place for him at first, during what may be called the crisis of the attack, for many reasons; the rest and warmth protect the heart from the strain of exertion and changes of temperature. On the other hand, the dyspnœa is usually worse in the recumbent position, even with the shoulders raised, and may be intolerable unless the legs are allowed to hang down; not unfrequently it is simply impossible for the patient to remain in bed. A suitable chair, therefore, is always necessary, with support for the elbows, shoulders, and head, which can be taken advantage of in turn in the frequent changes of position to which the patient has recourse to ease his breathing or elude discomfort, and the quickness and ingenuity of the nurse or medical man in devising expedients may greatly alleviate his sufferings. A bed table or other form of support upon which the patient may rest his arms or elbows and head when leaning forward will often be very useful. A patient will frequently sleep better in this position than in any other. Perhaps the most common state of things is that the patient is up during the day, and tries to spend more or less of the night in bed. When he cannot at once bear to go to bed at night he may undress and sit in his chair wrapped in blankets near the bed for a time, when he will often, after a nap or two, be able to lie down and sleep.

We come now to the prognosis and treatment of dilatation of the heart at a period when it has not given rise to the serious consequences just described, and an enormous degree of dilatation may be arrived at before such effects are developed. As regards physical signs, the most important evidence will be, not as to the actual size of the heart, but as to the strength of its walls. A greatly dilated heart which is capable of giving a recognisable apex beat and fair impulse of right or left ventricle is more to be trusted than one which has apparently undergone less change, but the movement of which can scarcely be felt at all. There is always a possibility that degeneration may enter into the causation of the symptoms. It is better, again, that the sounds should be strong than weak, spaced than approximated; and it is important that the second sound of both ventricles should be well marked. Irregularity of action is, according to my experience, of less consequence than frequency, and I have learnt not to attach serious importance to the regular alternation of a strong and weak beat so long as there is no great frequency with it. The pulse is important chiefly as an indication of the vigour with which the blood is propelled into the arterial system. Dilatation of the heart presupposes high arterial tension at the time of its production, and it is a favourable sign that a certain degree of this tension persists. When we find a low tension pulse, unless this is the result of treatment, it means that the heart has not sufficient strength to maintain the pressure in the arteries.

The probability of improvement or of prolonged immunity from ulterior consequences will next depend on the general condition of the patient, on the soundness and nutritional vigour of his tissues and organs, and especially of his blood-vessels; if he is weak and anæmic, on the cause and character of the impairment of health, whether it is inherent or accidental—whether, in effect, it is remediable or not; when the state of the heart and of the general health is attributable to alcoholic or other excesses, including the abuse of tobacco, to habits or mode of life or external conditions adverse to health; whether or not the patient is willing and able to renounce his self-indulgence, and relinquish his vices or alter his ways and surroundings.

When we come to consider the treatment of cardiac dilatation in this stage, the first question to be asked is, what object may we venture to set before ourselves? What assurance can we give our patients? Can we ever reduce existing dilatation? Can we even arrest the tendency to increase and avert or postpone the evil consequences? To no question can we return a more confident answer. Every day we see dilatation reduced in some degree in favourable cases, and at the worst much can be done to prevent the development of its ill effects. It has already been stated that in the acute aggravation of dilatation which gives rise to symptoms the apex and extreme limit of dulness may be seen to return towards the normal position day by day, and the well-named "curable mitral regurgitation" of Dr. George Balfour is only a form of dilatation incident to anæmia. The means to be taken are, in the first place, the removal of any recognised cause in the habits and mode of life and surroundings so far as this is practicable. Next to improve the general health by favourable hygienic influences and by suitable remedies. The amount of exercise to be taken will be a most important question, but no rule can be laid down applicable to all cases. Speaking generally, exercise is good, and whatever amount of walking can be done without breathlessness or exhaustion, and especially with enjoyment, that will be safe and beneficial, and, provided due prudence is exercised, walking uphill need not be forbidden. The exercise, however, should be regular and daily, not spasmodic with intervals of inaction. A walk may be taken day by day with advantage which taken only once a week would be injurious. The exercise, again, should not come immediately after food, and it is better taken early in the day than in the afternoon or evening. A walk into the City, for instance, might do good when a walk back after the day's work would do harm. In some cases the treatment may have to be begun by actual rest in bed for two or three weeks,

perhaps with massage, and the patient may have to resume exercise with just the same caution as food is resumed after hæmatemesis from gastric ulcer.

The question will now come before us whether we should recommend the graduated walking uphill at considerable elevations, known as the Oertel's treatment, for heart disease. In my judgment the idea is good, inasmuch as many people will submit to carry out strict regulations to which a certain amount of mysterious virtue is attached who will not obey common-sense instructions. I doubt very much whether any good will be done in fatty degeneration of the heart; some cases of early dilatation will be benefited, and an enormous number of imaginary cases of heart disease will be cured; the class of patients who come to us saying that they have heart disease will be attracted by the treatment as carried out; a few patients will be killed. But it is not always possible either to modify the patient's life in such a way as to put an end to the conditions which tend to produce and aggravate dilatation of the heart, or to secure for him all the desirable hygienic influence. It would be useless, for example, to recommend a City clerk to relinquish the sedentary occupation which is his only possible livelihood, and little less vain to order a lady who has never walked in her life to take regular exercise. We can, however, do much to keep down the arterio-capillary resistance or high arterial tension, which plays such a fatal part in the production of dilatation of the heart. We can regulate the diet and warn against habits and occasions which are injurious, and by securing efficient and continuous elimination from the liver and bowels we can often make just that difference which is required for the safety and comfort of the patient. This can usually be effected by an aperient pill containing a small dose of one or other of the appropriate mercurial preparations taken twice a week, and we must not be afraid to order patients whose hearts have given way under protracted tension to go on with such a pill for years. Tonics of various kinds may be given with advantage from time to time with acids or alkalies. It is not often that digitalis or remedies of the same kind will be required continuously, though they may render service occasionally.

Lecture

ON

THE RELATION BETWEEN NOSE AFFECTIONS AND DISEASES OF THE EAR.

Delivered at the Charing-cross Medical School,

BY A. MARMADUKE SHEILD, F.R.C.S. ENG.,

ASSISTANT SURGEON AND AURAL SURGEON TO THE HOSPITAL.

(Reported from Shorthand Notes.)

GENTLEMEN,—The subject of my lecture to-day is the relation between nose affections and diseases of the ear. I shall discuss the matter as plainly and practically as I can, without entering into the consideration of obscure affections. I hope that what I say may prove useful to you in your future professional life. The connexion between inflammatory affections of the middle ear and like affections of the nose and pharynx was very early recognised by writers on aural surgery; especially was it recognised and dwelt upon about the year 1887. It was in that year that the connexion between obstructive diseases of the nose and diseases of the ear was especially treated of by Meier. He may be looked upon as a pioneer in bringing into professional notice this all-important matter. Since that time it has become more and more recognised, until now it is well known to all those who deal with affections of the nose, throat, or ear. The first point I would strongly draw your attention to is this, that the mucous membrane of the tympanum and the mucous membrane of the naso-pharynx are directly continuous, and therefore it is very obvious that inflammatory affections of the naso-pharynx may spread by direct continuity of tissue into the tympanum. Almost all inflammatory affections of the tympanic cavity have their prototype in the inflammatory affections of the naso-pharynx. Mark, then, that if we have an unhealthy condition of the nose and throat with constant attacks of inflammation, we shall also meet with an unhealthy tympanum with recurrent inflammation, and the type of inflammation of the tympanum will originate or "take its cue" from the inflammation of the naso-pharynx. To illustrate this in as commonplace a way as I can we will consider one or two ordinary types of inflammation of the tympanic cavity, and first consider that well-known "ear trouble" which is called catarrh of the middle ear. The disagreeable symptoms of the attack are very likely familiar to some of you in your own persons. You get an ordinary catarrhal cold, accompanied with dryness of the nose and fever. Soon afterwards profuse discharge from the nose occurs, with perhaps pain shooting up the Eustachian tube. You next find that you are a little deaf, that you have a sense of "stuffiness" and "giddiness" in the head. What has happened is merely that the catarrhal process in the nose and throat has spread up the Eustachian tube, and has caused swelling and hyperæmia of the lining membrane of the tympanum, and has probably also narrowed or occluded the lumen of the tube by catarrhal swelling. The ordinary result of an attack like this is recovery. Patients are commonly content to let the affection take its own course, and the swelling of the mucous lining of the tympanum and tube gradually subsides, and these parts are restored to their normal condition. In many instances, however, a very slight degree of permanent deafness is often left behind, and recurrent attacks of this nature more often lay the foundation for chronic inflammatory changes than is usually believed. Next let us take a typical case of a more severe catarrhal condition of the throat and nose. In such the inflammation of the tympanic cavity may be associated with exudation of mucus, varying in quantity and quality, within the cavity of the tympanum. The resulting deafness and "stuffiness" are marked and serious. Though the patient cannot hear the voice of others, his own voice is distressingly loud, and tinnitus is marked. He is usually also cognisant of "bubbling" or "cracking" sounds. Unless such a case is treated, the sufferer may remain with his hearing seriously impaired. The exudative material poured out into the tympanic cavity will become organised, causing fibroid changes which are often irremediable. A third type, which is so familiar to all practitioners, consists of suppurative affections within the tympanum, complicated with the ulcerated sore-throat of scarlet fever, measles, diphtheria, and the like. In scarlatinal sore-throat the mucous membrane of the naso-pharynx is enormously swollen and hyperæmic, laden with micro-organisms of all kinds, and not uncommonly ulcerated. The type of inflammation is septic and virulent. Like pathological processes are induced within the tympanic cavity, and the unfortunate results which ensue are a matter of daily observation—destruction and discharge of the ossicles, perforation or destruction of the drum, and not infrequently complete loss of hearing. What I have put before you so briefly will, I hope, serve to illustrate the clinical fact first stated, that inflammatory processes in the nose and naso-pharynx are the great originators of inflammations of the tympanic cavity.

The practical lesson that we learn is this—that whenever we are treating any chronic inflammatory affection of the middle ear we must remember that it is our duty to treat morbid conditions of the nose and naso-pharynx also. This general consideration applies to all varieties of middle ear inflammations. A large number of these cases occur in young children, and it is of the greatest importance to remember that suppuration of the middle ear in children can be often entirely prevented, or much lessened in violence, if the naso-pharynx be kept clean and free from accumulated and inspissated discharge. This is a detail of treatment which is too often entirely neglected in cases of sore-throat and colds in the head. The measures by which you will best carry out cleanliness will be by gently syringing through the nares every four hours a very dilute alkaline and antiseptic fluid, pleasantly warm. We may employ a warm and dilute lotion of boracic acid, chlorinated soda, or the like. Such remedies do a great deal to "clear out" the back of the naso-pharynx. In a tolerant child or an adult you should invariably with a soft curved brush remove the inspissated secretion from the back of the nose with antiseptic and astringent applications. These indications in young and fractious children are very diffi-

cult to carry out, but a great deal may be done with patience and perseverance. You will find that though they will often resist brushing out the throat, they will permit you to clean out the naso-pharynx with a spray containing such drugs as iodine, benzoin, chlorate of potash, chlorine, or other moderately dilute and antiseptic applications. In the ulcerated throat of measles or scarlet fever, the importance of the above measures cannot be exaggerated. What I have already said must have its bearing and application on the great and complicated question of obstructive affections of the nose. For the worst cases of naso-pharyngeal inflammation are found in those patients who suffer beforehand from naso-pharyngeal obstruction. If you take the case of a perfectly healthy child having a perfectly healthy naso-pharynx, with no enlarged tonsils and no adenoid growths obstructing his nose, you will rarely find that such will suffer from destructive suppuration of the middle ear; but, on the other hand, if you have a patient who before the onset of severe inflammation has these complications, you will find that it is in such cases especially that dire results, as far as the ear is concerned, will ensue. The more important varieties of nasal or naso-pharyngeal obstruction to which I would draw your attention to-day are: (1) Adenoid growths and enlarged tonsils—I put these together because they are frequently clinically associated; (2) that so-called hypertrophic condition of the spongy bones of the nose in which these structures are enlarged and covered with swollen, hyperæmic, almost erectile, mucous membrane; (3) polypi of all kinds; (4) deviation of the septum of the nose and bony growths, so-called exostosis; and, finally, cicatricial contraction of the nares from old ulcerations of syphilis, necrosis, or the result of operative procedures. These, you will remember, are only some of the causes of obstruction of the nose and naso-pharynx that you are likely to meet with in practice, but they will suffice for our purpose to-day.

Let us, then, consider why these conditions may cause or complicate deafness. First of all, you will have to consider that in many of these conditions—and I want to be particularly explicit about this—the orifices of the Eustachian tubes are mechanically closed by swelling, adenoid growths, or especially inspissated mucus. This is found to be the case in greatly enlarged tonsils, adenoid growths, and great nasal obstruction. When there is nasal obstruction, it must be obvious that we cannot get proper ventilation of the naso-pharynx. The patient may not be able to "blow his nose" properly, and the result is that inspissated mucus and foul discharges collect in enormous quantities at the back of the naso-pharynx, forming a veritable plug of nasal excrement. We must also consider the possibility of mechanical interference with the normal acts of the opening and closing of the Eustachian tube. It is not at all clear to me how the Eustachian tube opens and shuts, but there are certain muscular fibres inserted into it, and it is supposed by some that the action of these fibres is interfered with by swelling or accumulated secretion, and that consequently the normal patency or closure is interfered with in the acts of deglutition and respiration. In the vast majority of cases of nasal obstruction if inspissated discharge hangs about the back of the naso-pharynx an unhealthy catarrhal condition of the mucous membrane is caused by it. This eventually leads to inflammation of the tympanum.

Having thus briefly considered some of the explanations of the association of obstructive diseases of the nose and deafness, we will next consider what are the leading symptoms of nasal obstruction. They are quite familiar to many of you. The patient is, in the first place, a mouth breather, invariably goes about with his mouth open. This gives rise to a vacuous expression of countenance, which often finds a corresponding condition in the intellectual powers. Such patients usually snore loudly at night, and very often are more or less deaf, the deafness being bilateral and varying in severity. These symptoms are common to many forms of obstruction of the nose, and are especially marked in young individuals who are the subjects of enlarged tonsils and adenoid growths. In the latter class of cases the voice is altered, and the patient pronounces his words badly, especially their terminations, speaking with a peculiar nasal intonation.

To make the diagnosis complete in the examination of a case of supposed nasal obstruction, you would first inspect the anterior nares by well dilating them with one or other of the specula I now show you, a good bright light must be thrown into the nose. You may use the electric light, good daylight, or a strong lamp and reflector. You can then definitely see and touch polypoid growths, great swellings or hypertrophy of the mucous membranes, or deviations of the septum nasi. If you next illuminate the back of the throat you may discover enlarged tonsils or adenoid growths. The latter usually show very characteristic signs of their presence. The tonsils are more or less enlarged, and the soft palate is frequently depressed by the bulk of the growth above. In bad cases portions of the growth may actually be seen. The appearance of the pharynx is more or less granular. If you detect these symptoms in a child or young adult who is a mouth breather, you need not put the patient to the inconvenience of passing your finger behind the soft palate. Such a patient is practically certain to be the subject of adenoid growths. Next comes the question how to best examine the back of the nose. First consider posterior rhinoscopy. This is exceedingly useful in adults, but children and nervous individuals who cannot bear the sight or contact of instruments seldom tolerate it sufficiently for you to profit by its adoption. In order to employ it the soft palate is well cocainised with a 5 per cent. solution of cocaine, and the mirror is then inserted behind the soft palate and turned into whatever position is best for getting a view of the posterior nares. Often it is needful to draw the palate forwards with a small sharp hook. I show you a useful form of this instrument, and also the self-retaining palate hook of Mr. C. Baber. Posterior rhinoscopy requires time, skill, and tolerance, with repeated examinations. Some of you have seen the method I commonly employ in the out-patient room, which has much to recommend it. After cocainisation the index finger, well protected with lint at its root, is rapidly passed behind the soft palate and swept over the posterior nares. This manipulation, well executed, gives much explicit information. By posterior rhinoscopy or manipulation, then, you may obtain a clear idea of the condition of the back of the nose in cases of obstructed breathing. Adenoid growths are perhaps the most important of all causes of nasal obstruction, and the idea is rapidly gaining ground in my own mind that a certain amount of these growths, with swollen mucous membranes and lodgment of secretion, are the great cause of deafness in many cases of apparent anterior nasal obstruction. What I mean is, that in cases of deviating septum and hypertrophy of the spongy bones the condition of the naso-pharynx is often the true cause of the associated deafness. Cases of nasal obstruction, especially adenoid growths, are not only important because they cause and complicate deafness, but from an educational point of view. I do not hesitate to express my belief that many of the failures that occur in the education of boys are due to a certain amount of deafness from these conditions. You all know the stupid boy at school, who generally has his mouth slightly open, who snores in the dormitory at night, who fails to learn his lessons. He is often the "butt" of his comrades, and sometimes has his "ears boxed" by the masters. The unhappy lad probably does not hear properly. His deafness varies according to the state of the weather, or whether he has a "cold in the head." But he may fail in the educational race, and have to end his career in some rural occupation. This is not an exaggerated picture of a considerable number of these cases. Sufferers from adenoid growths are worse in damp and cold localities, and the varying amount of deafness is one of the great characteristics of the affection. When we have the question of the treatment of these adenoid growths under consideration we shall find that of all affections of this kind which complicate and cause deafness the treatment of adenoids is perhaps the most satisfactory, because you may take an individual who is really seriously deaf, and by care and pains bring him to a condition in which he can hear perfectly well. Before operating for adenoid growths, or indeed any form of nasal obstruction, you should be quite clear that the condition of the auditory nerve apparatus is healthy, and that the patient has not had prolonged and chronic inflammation of the middle ear previously. To this I will again refer.

The treatment of adenoid growths, when they really exist, consists in their removal. I think one of the first points to bear in mind in connexion with operations upon them is the comparative risk from anæsthesia. This is

not as well known as it ought to be. When I tell you that I am cognisant of several fatalities having occurred you will see how urgent this consideration becomes. I always prefer in young adults to remove adenoids by the help of cocaine applied through the nose and to the naso-pharynx. In children and nervous individuals it is necessary, however, to give an anæsthetic. The patient should never be put so deeply under the influence of the anæsthetic as to deaden the insensibility of the larynx. Any material which finds its way into the air passages is then coughed up. When these growths are removed by scraping, cutting, or avulsion, sudden profuse bleeding takes place, the blood mixed with a marvellous quantity of inspissated secretion, and fragments of growth will often half fill a very considerable bowl. If a patient is deeply unconscious and in a bad position, the danger of his choking is sufficiently obvious. The operation usually performed by myself is scraping these growths away with the steel nail, strongly advocated by Sir William Dalby, which I now show you. This most useful instrument must not be used timidly. Your own finger nail is sufficient, if you have a strong one, for the cases of young children. [The lecturer here exhibited and described the principal instruments used in operations connected with the removal of adenoids of the nose, and continued:] You must not imagine that when you have removed the adenoid growths the treatment is at an end. It must be continued for at least three weeks or a month after the operation by swabbing out the naso-pharynx with astringent and antiseptic solutions, by syringing the nose and throat with the same remedies, and especially carrying out Politzer's treatment every day so as to render the Eustachian tube thoroughly permeable. If this be done the results are very gratifying both in improving the hearing and the intelligence of the patient. Professor Guye has written a most interesting paper on the connexion between intellectual torpor and nasal obstruction, pointing out the bad effects of nasal diseases on the cerebral circulation by lymphatic obstruction. My own idea is that the reason why these people are stupid and unintelligent is that they do not hear properly. At all events, on the removal of the obstructions you will generally find the parents telling you that the child has improved in intelligence, has moved up a class at school, and so on. You will next ask me whether there are any other risks in the operation for adenoid growths besides the matter of anæsthesia. There is one point which should be always inquired into before proceeding to remove either tonsils or adenoid growths—viz, whether the patient is the subject of the hæmorrhagic diathesis. Children are sometimes brought to us who are "bleeders," and if you perform operations on the nose or pharynx in these cases, you will place yourself in great difficulties, and may perhaps lose the patient. Another very important matter is, that in a certain proportion of cases of nasal obstruction there may be old-standing perforative otorrhœa, with a foul and septic condition of the tympanum. There is then some risk of an operation setting up brain mischief, or even leading to general sepsis.

Time will only allow me to speak briefly of the so-called hypertrophy of the spongy bones as a cause or complication of deafness. I have stated my belief that it is in the naso-pharynx we should especially seek the conditions which complicate or cause hardness of hearing, and it is my candid opinion that the influence of anterior nasal obstruction has been much exaggerated in this connexion. I am aware that I am speaking in direct opposition to many recognised authorities on this subject, but everyone, however humble, has a right to his own opinion, and I believe that many operations are now done upon the spongy bones and septum of the nose which further time and experience will consign to a well-deserved oblivion. Occasionally the spongy bones, or rather the mucous membrane over them, become so swollen and enlarged as actually to occlude the passage, and then there is a need of treatment. The common procedure consists, first, of cauterising the surface with the galvano-cautery, or by the use of chromic acid, and the resulting cicatrisation will usually sufficiently pucker up the surface of the bones to admit a sufficiently free draught of air to pass through the nose. More rarely it is needful to remove portions of the bone, either in front or posteriorly, with a small wire écraseur. Deviations of the septum nasi are only occasionally associated with deafness. To say that all deviations of the septum cause deafness is not correct. I have notes of cases of marked deviation of the septum where there was no deafness whatsoever, although the patients had been the subjects of this malformation all their lives. If I were to examine a case of unilateral deafness with corresponding extreme deviation of the septum nasi, I should long suspect and examine for some other condition than that of the nose as the cause or complication of the hardness of hearing.

The same remark applies to cicatricial contraction of the nostrils. You have the opportunity of seeing complete occlusion of the nostrils after lupus or syphilitic ulceration, and no deafness coexists. When cicatricial processes go on at the posterior nares, the result is different. Deafness is common in these cases, for the tube may be involved in the morbid processes. The instruments used for deviated septum and removal of the spongy bones are various knives, forceps, and snares, which I now show you. [After mentioning the various forceps and instruments used in these operations the lecturer proceeded:] But whatever operation you perform on the septum of the nose, you must remember that the septum will very readily recur to its former position, and therefore it requires to be kept straight. Ivory plugs form the best things the patient can wear as a septum splint, and these require to be worn by the patient for a certain number of hours every day for a considerable time before the septum can be got to retain its position permanently.

We have now to consider what conditions require to be revolved in our minds before recommending to a patient the performance of any operation on his nose for the relief or cure of deafness. The first thing we must consider is the period of time during which the deafness has lasted; in other words, the degree of chronicity of the deafness. A gentlemen twenty-two years of age was brought to me some months ago who was stone deaf—that is to say, if you bawled into his ear on either side he could not hear. Tuning forks applied to the head could be plainly heard by both ears, indicating that the auditory nerves were quite healthy. His friends informed me that all his life he had been subject to colds in the head and to sore-throat. The deafness was gradual in onset, and was of at least ten years' duration. The examination of his drums showed them to be opaque, shrunken, and lustreless, denoting that chronic inflammation had been going on in them and in the tympanic cavity for a long period of time. He had marked hypertrophy of the spongy bones, and was a mouth breather. My opinion was that in such a case dilatation of the nose and removal of the bones would be quite futile so far as relief of the deafness was concerned, because pathological processes had been going on for so long as to produce irremediable conditions.

Next we must inquire into the condition of the auditory nerve apparatus by careful examination through means of tuning forks. In such conditions as congenital syphilis, the sudden deafness following mumps, the specific fevers, and marriages of consanguinity, evidence may be found of labyrinthine mischief. Time merely allows me to mention these cases, and they are comparatively rare; but if you find nasal obstruction in such you will not markedly benefit them by operating on the nose. Suppose, in the next place, that the patient has had violent and severe suppurative inflammation of the tympanic cavity, and the drums and ossicles are almost entirely destroyed, you would in that case recommend removal of the adenoids or other nasal obstructions merely as an assistance in the treatment of the suppurative affection of the ear, and you would not promise that it would in any way improve the hearing.

Lastly, you must always in these cases, if you are honest as a medical man, be rationally certain that there is a definite disease of the nose to be operated upon, and should have a reasonable idea that the deafness may be dependent upon it. It is so easy to look upon the cavities of the body and see disease which does not really exist; and therefore before you say a patient is the subject of polypi, adenoid growths, hypertrophy of the mucous membrane, or the like, you must be quite sure that they exist to such a marked degree as to justify their removal by operation. Operations undertaken for conditions themselves not fraught with grave suffering or danger to life should be looked upon with a peculiarly jealous eye by judicious surgeons. Disaster in such is very lamentable. I plead for the cavities of the nose the same privileges as are accorded by careful surgery to other parts of the body: accuracy in diagnosis, care in selection, and a distinct rational belief that the patient will receive benefit from the operative procedures adopted.

ON PEROXIDE OF HYDROGEN, OR OZONE WATER, AS A REMEDY.

CONTINUED FROM A RESEARCH COMMENCED IN THE YEAR 1858 [1]

BY B. W. RICHARDSON, M.D., F.R.S.

INTRODUCTORY AND HISTORICAL.

IN the year 1858 I commenced a study on peroxide of hydrogen with the view of introducing it into medicine as an addition to our treasury of remedies. The history of this singular chemical body, discovered in the year 1818 by the illustrious French chemist Baron Thénard, had in 1858 almost become forgotten, and no one, as far as I could learn, had ever taken it up in respect to medical research; although, as I afterwards ascertained, a seat of learning at Haarlem did for some years offer a prize for a medical research upon it, which prize was withdrawn not very long before my work was entered upon, simply because there had never been a competitor. The peroxide when I commenced my investigations was so rare a chemical curiosity that I could not obtain it in quantity, and was therefore obliged to set up the necessary apparatus for its manufacture in my own laboratory. In the manufacture I followed in every particular the instructions left by Thénard, and continued the manufacture until I could assign good reasons for advancing the fluid into the position of a valuable remedy in the treatment of disease. The great novelty of the peroxide solution—for the substance must be considered a solution, although it can be made to take the gaseous form—rendered the study of its physical properties alone of extreme interest, and, as it still remains a novelty to many, I may with advantage devote a few moments to a description of one or two of the special qualities of the solution; otherwise I might be talking an unknown language to some who are not conversant with certain primary facts, themselves unique in the history of chemical substances. This solution, then, is water containing, according to strength, so many atmospheres of oxygen. It is an oxygen atmosphere in solution. It is not, however, a mere mixture, but a peculiar chemical compound. The oxygen can be made to accumulate, volume by volume, until the volume of water, say as much as would fill a pint measure, can rise to ten, twenty, thirty, and some say even over a hundred volumes of oxygen, before complete saturation is reached and a volatile body is formed. In the specimens on the table before us, prepared by Mr. Robbins, we have solutions of three strengths—viz, of ten, twenty, and thirty volumes. We hold, therefore, in a specimen of the peroxide condensed oxygen chemically combined either with the hydrogen of the water, or with the oxygen of the water, or with the two elements acting as a radical. There is here not much difference at first sight from what is common in combinations where there is accumulation of one element on another; as, for example, in the case of carbon with one equivalent of oxygen as in carbonic oxide, and carbon with two equivalents of oxygen as in carbonic dioxide. But now comes a distinction. The combination of the added oxygen in hydrogen peroxide is stable in the presence of some substances, unstable and easily evolved in the presence of others. Some substances, inorganic or organic, when added to the solution are neutral; other substances, inorganic or organic, evolve the oxygen and are themselves unchanged; a third kind evolve the oxygen, and with that some of their own contained oxygen; a fourth kind absorb the oxygen into themselves.

I will illustrate this by experiment. Here are flasks equally charged with a ten-volume solution of the peroxide. To flask *one* I add a portion of oxide of iron: the action is neutral. To flask *two* I add black oxide of platinum: there is brisk action, so that I can light a taper from the oxygen thrown off. To flask *three* I add solution of permanganate: there is very brisk action, and, with the action, evolution of oxygen from the permanganate as well as from the solution. To flask *four* I add arsenious acid: there is absorption of the oxygen by the arsenious compound. These are inorganic bodies; let me compare them with organic. Into flask *five* I put albumen: the action is neutral. Into flask *six* I put fibrin: there is brisk evolution. Thénard, in a general way, had a wonderful knowledge of these distinctions, but he did not live to follow them out or apply them. They are all important to our medicinal labours, in pointing the way to success by the experimental instead of by the empirical mode of questioning nature.

These observations led me very early in my research to form an original view as to the constitution of the fluid. When I liberated the oxygen from the solution, by one or other of the means described above, I found that the oxygen was neutral—that is to say, it presented neither ozonic nor antozonic qualities, but was like the oxygen of the common atmosphere in its natural state. When, however, it existed in solution in the form of peroxide, it responded to ozone tests, rendering the ozone test-papers of deep, dark colour, as I now demonstrate. These facts led me to conceive that the extra oxygen exists as ozonised oxygen, ozone, in combination with water, so long as it is in solution; but that, as it comes off from the solution, it escapes as atmospheric oxygen. This theory has met with opposition, for which I have much respect, but I still hold by it; and I call special attention to it here because, from a medical point of view, it is of primary importance. As I shall show, we use the oxygen of the solution in two forms: sometimes as a solution, when it is ozonic; and sometimes as a gas liberated from the solution, when it is neutral. The difference is great; it is the difference between ozone and oxygen, and until the profession understands that difference the utmost confusion must prevail in regard to therapeutical action.

It may gratify a new generation of Fellows of the Medical Society of London if I briefly relate what led me to use this solution in the first instance. It was in this way: I was working at ozone, and had been studying, with the late Dr. Moffat of Hawarden, the changes of disease in what he called "atmospheric ozone periods." I made peroxide, and found that the oxygen condensed in it coloured Moffat's ozone test-papers of starch and potassium iodide, a fact which showed that this oxygen was more active than the oxygen of common air. It then occurred to me that the peroxide might be of service as a medicine if its action on the animal body and on the tissues were well investigated and defined. In those days we were inclined to believe that diabetes was due to the deficient oxidation of organic material,—a theory which an original observation of mine, namely, that dogs could be made to eliminate urine containing glucose by subjecting them to an atmosphere of carbonic oxide, seemed to confirm.

As a result of this line of thought I made an original investigation, the results of which I reported at length in a paper read to the Medical Society in the session of 1860, describing the chemical, physiological, and therapeutic action of the peroxide. I also fixed in this paper the best form of the peroxide of hydrogen for medical use, suggesting ten-volume strength as the most certain and convenient for ordinary use. At the meeting of the Society on March 3rd, 1862, under the presidency of the late Mr. William Coulson, I made a second report on the medicinal use of the peroxide. I had by this time used it in 223 cases of disease, including cases of phthisis, diabetes, anæmia, subacute and chronic rheumatism, strumous enlargement of the cervical glands, mesenteric disease, pertussis, chronic bronchitis, chronic laryngitis, mitral disease, and some forms of dyspepsia. On referring back to these two communications to the Society, I find in them a good deal of new physiological inquiry. I find that I had tested all the free tissues of the body to learn which of them did and which of them did not eliminate the oxygen by contact. I found that fibrin of blood and cellular tissue liberated the oxygen, that albumen and gelatine did not liberate it, that blood entirely deprived of fibrin absorbed the oxygen; and that common water deprived of all its gases so efficiently that fish could not live in it could be reoxygenated and revitalized by addition of the peroxide solution, but not to the same perfection as obtains in water that has not been deprived of its natural air. It was also in these researches that I observed for the first time the remarkable influence of temperature on the action of the oxygen on the body; that heat caused oxygen to lose its power of sustaining muscular contractility, and that by it oxygen could be made a relaxant even of tetanic spasmodic rigidity. What, however, will interest most a practical body of men like the members of the Medical Society of London will be the *résumé* of the therapeutical properties of the peroxide from those earliest papers. The *résumé* was as follows:—In the paper of 1860 it was advanced (*a*) that the

[1] Essay read before the Medical Society of London, on Monday, March 23rd, 1891

peroxide quickens oxidation, increases secretion, arterialises blood, and hastens the decomposition of decomposing animal tissues; (*b*) that in combination with blood it restores the power of muscles just dead to contract, and yet calms muscular irritability; (*c*) that it promises valuable aid in a large number of cases of disease; (*d*) that in instances of poisoning by narcotics and by the alkaloids it might with advantage be introduced into the blood by transfusion or injection; (*e*) that in tetanus it affords a most rational treatment, since tetanic rigidity is relaxed by its presence in muscle; (*f*) that in typhus, in which death occurs from what I designated *asphyxia commencing in the blood*, it might be employed with good effect as an oxygenator; (*g*) that it ought to prove useful both as an internal and external remedy in the treatment of cancer. In epitome of results in 1862 I drew the conclusions: (*a*) That in diabetes the peroxide reduces the specific gravity of the urine, whilst it rather increases quantity; (*b*) that in chronic and subacute rheumatism it affords relief; (*c*) that in valvular disease of the heart with pulmonary congestion it gives relief to the dyspnœa; (*d*) that in mesenteric disease and in jaundice it causes an improvement in the digestion; (*e*) that in pertussis its effect for good is very remarkable, since it cuts short the paroxysms of cough, and seems decidedly to shorten the period of the disease; (*f*) that in chronic bronchitis it lessens the dyspnœa, and renders the expectorated matter less tenacious; (*g*) that in chronic laryngitis it gives pain on being swallowed, and does not appear to be useful; (*h*) that in anæmia it does not of itself render a service, but favours the good effect of iron; (*i*) that in the first stage of phthisis it causes improvement in the digestion, and in the later stages gives unquestionable and even wonderful relief to breathlessness and oppression, acting, in fact, like an opiate without producing narcotism, and assisting oxidation.

But the most important new observation I had to communicate to the Society in 1862 was that in free and frequently repeated doses the peroxide could be made to produce a modified salivation, a fact which led to two suggestions: one, that in the use of the mercurial and iodide preparations it might be the chlorine or iodine in them which caused the ptyalism; secondly, that the peroxide would be a good substitute for mercury and the iodides in the treatment of syphilis. In the discussion which followed upon the reading of this paper I was warmly supported on several points by Drs. Septimus Gibbon, Symes Thompson, and Gibb, all of whom had been prescribing the peroxide on the suggestions made in the previous paper of 1860. Dr. Gibb bore special testimony to its value in affording relief during the last stage of phthisis, for which I had prescribed it in the case of a member of his own family.

Such in the briefest terms is the history of the introduction of the peroxide of hydrogen, as it is commonly called, or ozone water, as I should call it, into medicine. Soon after it was thus introduced it created a great deal of discussion, but owing to difficulties in its manufacture and some instability of the earlier specimens of it, it fell out of favour; except in two unexpected directions. An incidental observation of mine that the solution gave a golden colour to feathers led to the employment of it as a golden hair-dye; while a similar reference to its effective action as a deodorant and disinfectant led, I believe, to its use in that very excellent compound called "sanitas." Occasionally also it was employed in medicine, and now and then I was consulted in regard to its employment. Matters remained in this state until about five years ago, when by some sudden and inexplicable impulse the peroxide began to become popular in medical practice, especially in America, and from that time onwards I have had communication with practitioners, both at home and abroad, who were anxious to be informed on points of a practical kind relating to it. It was this circumstance that led me three years ago to propose to revive the subject in the Medical Society of London, and finally to bring forward the present paper. This was the more necessary because, although practitioners who are now largely prescribing the remedy have often, in the most handsome manner, assigned to me the credit of originating the practice, they do not seem to have seized on the principles which led me to introduce it, nor to see the compound nature of the fluid and the different lines of practice which spring from that recognition. Meantime, in the twenty-nine years that have elapsed I have continued to work at this research; practically in the steadiest manner, theoretically by fits and starts, as the opportunities of my overcrowded life have permitted. Now, as a kind of continued report, I propose to give a further account of my stewardship during the gap of time that has supervened since I last spoke on this topic from this place.

NEW METHODS OF APPLICATION.

In carrying out this idea let me notice in the first place a few new facts bearing on modes of administration which did not in any way belong to the previous communications to the Society. Some time about 1863 I made an observation regarding the behaviour of the peroxide with ether. In agitating a thirty-volume solution of the peroxide with anhydrous ether I found that the ether became ozonised, and that it was in this way possible to make a new and useful medicinal preparation. To the preparation so formed I gave the name of ozonic ether, and from the time when it was first announced to the present it has been utilised. The late Dr. Day of Geelong, in Australia, sent to me early for the mode of preparation, and having learned to use it in his own practice, devoted to it much study up to the end of his valuable life. He warmly supported my application of the fluid in the treatment of whooping-cough and its use as an inunction after scarlet fever. He it was who first employed this compound with guaiacum as a blood test. The admixture of the peroxide with a volatile compound like ether led me to another modification—namely, the administration by inhalation of the oxygen evolved either as oxygen, ethereal oxygen, or ozone, for I soon learned that it could be administered, as I shall show presently, in all these states. This was a distinct advantage, as it enabled me to move from the mode of administration by the mouth to a larger and, in cases of lung disease, a more direct method. Taking further advantage of the ozonic properties of the peroxide in solutions, I introduced it in 1865 at the meeting of the British Medical Association at Chester for the deodorisation and disinfection of rooms in which patients suffering from infectious diseases are under treatment, and also for application as spray to fetid or ulcerated surfaces, as in diphtheria, syphilitic ulceration of the throat, and gangrene. For this purpose it may be used either as ozonic ether or simply as the aqueous solution. In addition to the above new progressions I have made others of a physiological and practical kind, bearing on other possible methods of administration. Some of the facts disclosed in this direction are published in the last *Asclepiad*, and I may therefore be content by stating of them in summary, that it is practical to inject the peroxide solution subcutaneously; also, under some circumstances, into mucous and serous cavities, and even into the pulmonic structures. Lastly, I would report in this place that I have tested the effects of morbid substances like purulent matter on the peroxide, as I had previously tested it on normal structures.

OLD AND NEW EXPERIENCES IN PRACTICE.

Let me now proceed to compare the practical experiences I have gained in the use of the peroxide since 1862. In the previous reports I dealt with many cases of disease in which I had applied this remedy; and in respect to all the forms of diseases specified I may say that in the long experience which has succeeded I have nothing of moment to retract, little to modify, much to emphasise and support.

Diabetes.—I have many times prescribed the peroxide solution in this disease since 1862. In four cases, specially noticeable because occurring in members of our own profession, the patients were all satisfied of benefit from it, one of them taking it during a period of eleven years. The results have always been that it reduced the quantity of sugar, but did not reduce the quantity of water eliminated, unless it were combined with codeine, with the use of which Dr. Pavy has made us so familiar. Codeine *three* grains, alcohol (sp. gr. 0·830) *two* fluid drachms, solution of peroxide of hydrogen (10 volume strength) *two* fluid ounces, distilled water to make *twelve* ounces, makes a mixture of which half a fluid ounce may be taken three times a day in a wineglassful of water, and forms the most useful prescription I have ever used in diabetes.

Phthisis pulmonalis.—In the treatment of phthisis pulmonalis the solution has been constantly in use, and in it I have found the greatest service. In some cases of this disease, in which the solution has been borne in large doses during the early stages, it has led to such remarkable results towards recovery that I might almost have

been pardoned if in younger and enthusiastic days I had declared in it the discovery of a specific. Happily a natural fear of the *experientia fallax* held me back from such a course; but the fact ought not to prevent me from stating that in the first stages of phthisis it is of all medicinal remedies I know the most valuable, and that in the later stages, when dyspnœa is the distressing symptom, it is, especially in combination with ozonic ether, the remedy that gives most relief. It soothes, and it seems to supply oxygen to the blood, and so act vicariously, to a small extent, for the purpose of respiration.

Pertussis.—I repeat all I previously said about the value of the peroxide in the treatment of whooping-cough. I am sure there is nothing so near to a specific for this affection. The only difference I have instituted in the employment of it in this disease consists in prescribing it in the form of ozonic ether. I prescribe it for children in this form, in doses of from ten to sixty minims, diluted with half a fluid drachm of spiritus tenuoris and four drachms of water, to be taken four times a day, with a little more water if that be preferred. But I also prescribe the ozonic ether in this disease by inhalation from the Siegel spray inhaler. In one instance, where the paroxysms were as severe as I have ever seen them, they were arrested at once by this inhalation, and were held in such control by continued inhalations that what may be called a "cure" was the immediate result. As to the power of the oxygen to control muscular spasm, I repeat with still more insistance its value. In practice I have availed myself of the peroxide with ether, not only in whooping-cough, but also in asthma and in angina pectoris. Here the ethereal solution can be used by inhalation in its simple form, or combined with amyl nitrite, or other body of the antispasmodic class that will admix with ether and diffuse with it. In these affections I administer by inhalation in a manner that will be demonstrated in the last section of this essay.

Local use for ulceration and purulent exudation.—In the paper of 1862 I recommended the use of the peroxide for external application in cases of surface decomposition, ulceration, and purulent exudation. I have to emphasise this use. I will name one case alone in illustration. I was called to see a gentleman advanced in life who was suffering from moist senile gangrene of the foot. The extremity was so offensive and the separation so slow, although there was a fair line of separation, that the management was most distressing. I had the foot wrapped in cotton-wool holding peroxide solution slightly acidulated with dilute hydrochloric acid. The offensive odour was at once removed, and the process of separation went on rapidly; the foot soon fell off, leaving an excellent healing surface. The patient lived many years afterwards in fair health, and died at last of mere old age.

Syphilis.—I restate the value of the peroxide in syphilis, and especially in all the chronic stages and conditions of syphilis in which mercury or potassium iodide would, usually, be resorted to. It seems to me, in these cases, to have an intermediate action between mercury and potassium iodide. It is also useful in indolent syphilitic eruptions, and it has the great advantage over both mercury and the iodide that it leaves no after-effects of an injurious character. Salivation from large and frequently repeated doses is soon recovered from when the fluid is withdrawn, as if the ptyalism had been induced by a volatile substance. It also aids the action of mercury, rendering much smaller doses of that remedy effective. The property exemplified in this action is that of elimination by excitement of glandular function, an excitement probably always sustained by the oxygen of the tissues in normal states of health, and only accelerated by the active oxygen. I have of late years become so confident of the value of the peroxide in the treatment of syphilis under the conditions in which mercury or iodide come ordinarily into use that I have employed it as a matter of course. I use it in the primary as well as the secondary form of the disease, and for those cachectic lesions in the syphilitic constitution to which the term "tertiary" is applied there is, I think, no remedy equal to it. In obstinate cases of ulcer and cutaneous eruption it goes admirably with the mercurial bath, and may be prescribed in doses of from two to four drachms three times a day with full doses of fresh cinchona infusion. The solution also has its local use. It makes an excellent injection into the nasal cavity when there is syphilitic ulceration of the cartilage and spongy bones.

(To be concluded.)

THE ELECTRIC BATH.

By W. E. STEAVENSON, M.D.CANTAB., M.R.C.P.,
IN CHARGE OF THE ELECTRICAL DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL; PHYSICIAN TO THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.

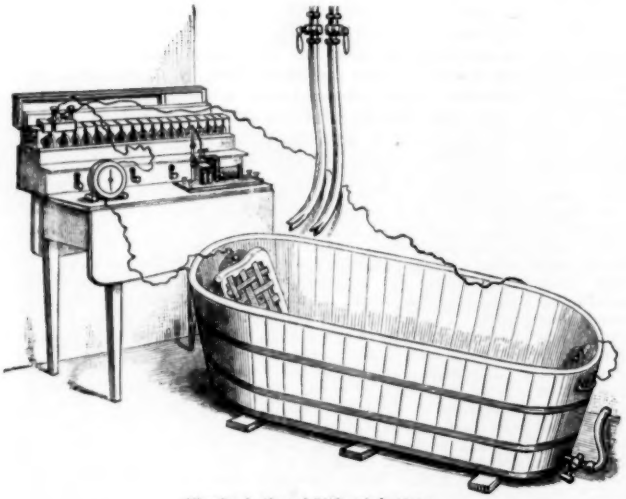
THE electric bath is used in the treatment of morbid affections that influence the whole constitution, especially in some having their origin in the central nervous system. It is an easy way of applying general faradisation, but not so efficacious as when the interrupted current is applied successively to the nervous centres by means of a dry electrode or one moistened with salt-and-water. It is an extravagant and wasteful way of applying the continuous current, except in such conditions as those alluded to, in which the general system suffers, and when there is no local manifestation of the disease on which the effects of the current can be concentrated. Both currents may be combined and used through a bath, and perhaps this combination is more easily accomplished by the use of a bath than in any other way. It has yet to be proved that the combined current possesses any increased therapeutic value; it is certainly not so useful as the continuous current in rheumatoid arthritis, lead poisoning, lateral sclerosis, and gout. The interrupted current may be used singly to the extensor muscles of the wrist in lead palsy after the galvanic bath has been administered.

The bath itself, which holds the water, may be made of metal, porcelain, or wood. When made of metal the bath forms one of the electrodes by having the rheophore from one pole of the battery attached to it. Such baths are usually made of copper, and are kept quite bright. A japanned metal bath is not suitable for any form of electric bath. When the copper bath is used provision has to be made so that the patient may not touch the metal. The bottom of the bath is covered by wooden lattice work on which the patient lies, a rest is also provided for the back, and protecting pieces of wood are placed at the sides, at the position about where the hips would come, so as to prevent the body of the patient touching the sides of the bath. This form of bath cannot be so advantageously used for influencing the general system, as the second electrode has to be used locally on different parts of the body, and the part that it is applied to has, for the time being, to be out of the water. On this account such strong currents cannot be borne as when the whole of the body is immersed; and although most probably the current is widely diffused, and enters the body at many points, it is more or less concentrated at the part to which the second electrode is applied, and as the resistance is greatly reduced by the warm water a strong current cannot be tolerated. With this form of bath, or this mode of administering the bath—that is, with the second electrode applied to a part out of the water,—the conducting power of the water may be increased by the addition of salt, soda, or acid. Any addition of the sort is inapplicable in the usual and more useful modes of administering an electric bath, as will presently be explained. The best bath to employ is one made of a non-conducting material such as porcelain or wood. A porcelain bath is the cleanest and best, but it is also the most expensive and is very heavy. Each porcelain bath is made in a separate mould, and many are rejected when turned out on account of some flaw; this difficulty experienced in their manufacture is compensated for by an increased price being placed upon the perfect ones. A wooden tub is therefore the cheapest. The best wood of which it can be made is oak, similar to that employed for ordinary household tubs. The appearance can be improved by the outside of the bath being polished and the hoops of iron which support it being painted black. The inside of all wooden baths used for electrical purposes should be carefully painted with non-metallic paint. White non-metallic enamel is the best for this purpose. If the inside of the bath is not thus protected the wood becomes waterlogged, and is then a conductor of electricity. The water in the bath should be of the temperature of 100° F., if the patient can bear it, as the conductivity of the water is increased in proportion to its temperature; but it is often advisable to give the first bath of a series at a temperature of 98°. Many patients cannot at any time bear a higher temperature. The bath should be well filled with water, so that when the

patient lies down his whole body and shoulders may be covered. A bath thermometer should always be used to ascertain and regulate the temperature.

In the ordinary and more efficacious electric bath a metal plate is placed at the head and foot, and always kept bright. These metal plates form the electrodes, and each is provided with a binding screw, to which the rheophores from the

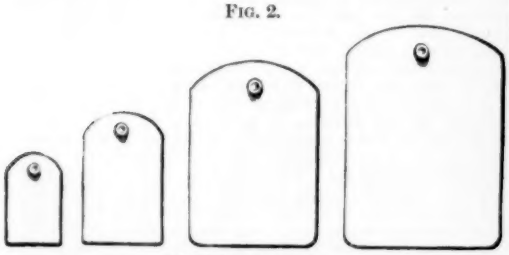
FIG. 1.



Wooden bath and Stöhrer's battery.

battery can be attached. The best metal is copper. It is no use having these metal sheets plated, as is sometimes done for appearance sake, for the plating is always decomposed on the one attached to the positive pole. The electrode placed at the head of the bath is usually the larger, and may measure a foot and a half by a foot, that at the lower end of the bath being eleven inches by nine. Smaller plates are used for the hips and knees when it is wished to localise the current more or less to those parts. The water should always be deep enough in the bath to cover the plates.

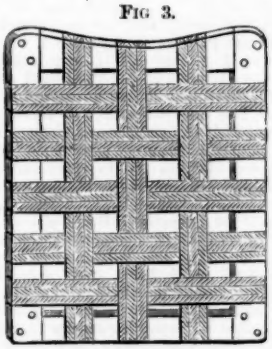
FIG. 2.



Metal plate electrodes.

The shoulders and back of the patient are prevented touching the plate at the head of the bath by a rest made of wood, something like a picture frame across which is stretched pieces of webbing. A depression is made in the upper bar of the frame to support the back of the patient's head. The feet may be allowed to touch the electrode at the opposite end of the bath because the epidermis on the soles is so thick that it is not likely to become blistered. If a patient prefers she need not place her feet against the lower electrode, but may keep them in close proximity. A galvanic current will always prefer to traverse the human body when immersed in ordinary water, as the body is the better conductor; but not so greatly superior as to insure all the current passing through it. The water in the bath offers a broad conducting medium with a large transverse sectional area, several times larger than the patient, and therefore a large portion of the current traverses the water and is altogether lost to the patient. This makes the employment of electricity in the form of a galvanic bath such a wasteful one. It has been calculated that a fifth part only of the current traverses the patient. Thus with a current strength of 200 milliampères passing through the bath the patient gets forty milliampères only. It can easily be shown that part of the current traverses the human body when immersed in

FIG 3.



Rest for back.

a bath even if the feet do not touch the bottom electrode, for if one of the legs is held up out of the water the current strength, as registered by the galvanometer, is immediately reduced. "That the body conducts better than the water is proved by this experiment, which we have often made. Place both hands, at some distance apart, in a bath through which a current of considerable strength is running, and a sensation will be distinctly felt in them. Bring the hands still immersed very close to each other and the sensation will be much diminished. When the hands are far apart a considerable portion of the current passes through the body from one hand to the other. It prefers this much longer and round-about road to the direct path through the water.[1] When a faradaic current is passing the effect is such that the wrists are quite doubled up by the contraction of the muscles when the hands are held far apart. If salt or acid is added to the water, the water becomes a far better conductor than the human body and the whole of the current passes through it. A metal bath is also inappropriate for this form of treatment, when it is wished to influence the general system; for if two electrodes were placed one at the head and the other at the foot of a metal bath, the current would run round the bath and not enter either the water or the patient. This is also almost invariably found to be the case with japanned metal baths. The japanning is seldom so perfect that the current cannot in some way or other find its way to the metal and escape the comparatively badly conducting water and patient. In the treatment of a case the current should be allowed to flow through the patient for from ten to fifteen minutes. It is often not possible to detect much improvement in a patient's condition until after the sixth or eighth bath. The first five or six baths may be given on consecutive days, and then every other day until the end of the course. A course may consist of thirteen or fourteen baths. A patient may have more if he wishes, and if the improvement continues; but often, after a course is concluded, a patient's condition is so improved that the restoration to health will proceed although the baths have been discontinued, and the improvement be maintained until some fresh cause arises to produce a relapse.

The current strength employed in a galvanic bath may be raised so that the galvanometer registers 200 milliampères, but it is best for the first bath or two to pass a current of 60 or 100 milliampères only through the water. A good cell to employ is the large No. 1 Leclanché. A Stöhrer's battery may also be used as represented in Fig. 1. The cells are here added to the circuit by a travelling commutator, two cells being added at a time. There is more

[1] Beard and Rockwell: Medical and Surgical Uses of Electricity, third edition, p. 396.

risk in the employment of these batteries of giving a patient a shock from some imperfection in the contact-makers under the commutator; but Stöhrer's batteries are the best both for electrolysis and baths, and, in fact, for all purposes where a fairly large external resistance has to be overcome, as the description of cell composing a Stöhrer's battery does not so easily polarise as Leclanché cells do. When Leclanché cells are used, the No. 1 size are preferable for baths on account of their producing a more constant and sustained current than the smaller sizes. Leclanché cells have the advantage of not so frequently requiring attention. The galvanometer that is included in the circuit should be a highly graduated one, such as Gaiffe's, which is used for the electrolysis of fibroid tumours. These galvanometers are graduated up to 250 milliampères. Two hundred milliampères is a sufficient strength to employ in a bath.

The patient, after entering the bath, should be allowed a few minutes to recover from the reaction produced by the warm water before the current is turned on. The current should be increased slowly and the galvanometer watched, and the current strength reduced as slowly at the termination of the bath. A medical man should always be present to regulate, increase, or diminish the strength of the current. The patient can be provided with a bathing-dress, and of course with female patients a nurse would always be in the room. The medical man's attendance is only required while the current is flowing. An arrangement exists on the switch-board or on the battery for completing the circuit, and for gradually increasing the strength of the current without any interruptions taking place, so that all chance of giving a patient a shock is avoided. As the current is slowly augmented the only sensation experienced by the patient is usually a slight pricking at the ankles from their proximity to the negative pole. A galvanic taste is produced in the mouth as the current becomes stronger. Should the patient's head feel full or throbbing during the administration of the bath, a cold wet towel may be placed on the top of the head; and if any faintness is caused the current should be reduced. An electric bath should not be taken too soon after a full meal. During the bath the pulse-rate is said to be diminished, as is also that of the respiration. After the bath the skin of the back which was opposite the upper electrode will be found of a bright-red colour; this will remain for about two hours. After dressing the patient should rest for fifteen or twenty minutes before going out into the open air, and should not immediately engage in exhausting exercise. There appears to be no tendency to catch cold after an electric bath, as is often the case after an ordinary bath. The patient generally feels exhilarated and better. Should the patient feel languid and depressed after each bath the treatment should not be persevered in.

(To be continued.)

ON ADDISON'S DISEASE.

BY J. DIXON MANN, M.D., F.R.C.P.,

PHYSICIAN TO THE SALFORD ROYAL HOSPITAL, LECTURER ON FORENSIC MEDICINE AND PRACTICAL TOXICOLOGY IN OWENS COLLEGE.

(Continued from p. 655.)

IN discussing the possible influence of disease of the adrenals as the primary link in the chain of symptoms we call Addison's disease, these bodies may be regarded from two standpoints—(1) as ductless glands, and (2) as nerve structures. As glands, any pathological changes in them could only cause Addison's disease by allowing abnormal pigment, or pigment-forming substance, and some toxic product which it is their function to excrete or to destroy, to be present in the blood, the pigment being responsible for the skin discolouration and the toxine for the more obviously nervous symptoms. Whatever pigment-yielding substances may be present in the blood as a consequence of arrest of function of the adrenals, such substances do not exist in the blood *qua* pigment. No trace has ever been found in the blood in Addison's disease either of free pigment granules or of any pigmented appearance of the white corpuscles. The assumption of a soluble chromogen in the blood, which under normal conditions would be removed by the adrenals, is not so easily negatived by direct evidence. The tendency of the above-mentioned experiments on animals is to prove that in them the adrenals are functionally active in adult life. How far this is the case in the human adult is doubtful. The compensatory hypertrophy which is found to take place in the lower animals is a strong proof that in them the adrenals partake largely of the nature of glands—it is characteristic of glandular structures to hypertrophy when there is an excessive call on the functional activity of the gland. In the early period of development the adrenals in the human subject are relatively large, and they probably exercise important glandular functions. After the commencement of extra-uterine life they are relatively insignificant in volume. If the adrenals in the human adult act solely as glands, one would expect in those cases in which one adrenal only has been destroyed by disease that the other would be found hypertrophied. The post-mortem records of such cases do not bear this out. Allowing, however, that the adrenals do to a certain extent act as blood-depurating glands, there are difficulties in the way of accepting cessation of their function as the cause of Addison's disease. The skin pigmentation in Addison's disease, except in degree, differs in no respect from the normal pigmentation in the white races, found in the scrotum and round the nipples of the two sexes respectively, on the exposed parts of the body after being subjected to powerful sunlight, and in the skin of the negro. The identity refers both to the histological position and, as far as is known, to the chemical composition of the pigment. The inference is that the pigmentation of Addison's disease, like many other pathological conditions, is nothing more than an exaggerated and widely spread form of a physiological process. The common genesis of physiological skin pigmentation and that of Addison's disease has a most important bearing. The question has been exhaustively discussed by Nothnagel,[1] and the conclusion he arrives at is that there is a complete anatomical and histological agreement between the two kinds of pigmentation indicative of their common origin. Further consideration of the subject is reserved until pigmentation of the skin is specially dealt with. Admitting that normal skin pigment and that of Addison's disease are derived from a common source, it follows that if the adrenals excrete effete blood-colouring matter, and if cessation of this function is the cause of skin pigmentation in Addison's disease, one of two conditions must be conceded to account for physiological skin pigmentation: 1. That the adrenals habitually perform their function imperfectly, and leave a percentage of the pigment-forming material in the blood at the disposal of certain of the rete cells, in order to provide for physiological requirements. If this were so effete colouring matter would always be present in the blood, and the question naturally arises, What is to prevent the whole of the lower layer of the rete cells becoming charged with it under normal conditions? 2. If the adrenals remove all effete colouring matter, that there is a perpetual struggle for it between them and the lower layer of the rete Malpighii through the intervention of the carrier cells of the corium. This would be a necessary corollary to the entire removal of the effete colouring matter in order to provide for skin pigmentation known to be independent of disease of the adrenals, as, for example, that which comes on after prolonged exposure to the rays of the sun or other exceptional mode of skin stimulation. Such stimulation might be supposed to act by temporarily giving the carrier cells in the regions subjected to its influence a greater affinity for the effete colouring matter than the adrenals. On this hypothesis the normal pigmentation of the areolæ round the nipples and elsewhere would be provided for by the assumption that the rete cells in these parts are supplied by carrier cells permanently endowed with a greater capacity of abstracting effete pigment from the blood than that of the adrenals. Under these conditions any disturbance of the adjustment between the pigment cells and the adrenals (in favour of the pigment cells) would determine general skin pigmentation. Such disturbance of the adjustment, to the advantage of the pigment cells, would be caused by any destructive lesion of the adrenals, and would be inevitably followed by skin pigmentation. This is contrary to experience. The occurrence of skin pigmentation from disease of the adrenals is almost entirely limited to one form of morbid change in them; they may be completely destroyed by other morbid processes without a vestige of skin pigmentation. The fugitive character of the coloured products obtained from the adrenals, and the utter

[1] Zeitschr. f. Klin. Med., 1885.

want of resemblance in chemical reactions between such products and the pigment contained in the rete cells, afford further evidence against the view that the skin pigment is derived from effete blood-colouring matter, in the elimination of which the adrenals are concerned. The length of time that elapses between destruction of the adrenals and the appearance of pigmentation looks more like the result of intermediate action than of interference with the excretory functions of a gland. It might be expected, if it were solely a question of non-removal of an abnormal pigment from the blood, that the skin would speedily afford evidence of its unwonted presence. Cases occur, however, in which pigmentation appears only during the last few months of life, and yet the adrenals are found to be the seat of cretaceous degeneration, obviously indicative of prolonged disease, which in its early stage would as completely interfere with the functions of a gland as at the period when the pigmentation took place. Meckel[2] and Klebs[3] state that in negroes the adrenals are very much larger than in the white races. This hardly bears out the view that the adrenals are the excretory glands of effete blood-colouring matter whence the skin pigment is derived. If the skin of the negro were supplied with pigment from this source, it would probably require all the effete hæmoglobin products to maintain its hue. Why, then, should glands which have only to excrete a possible small residuum of effete pigment be developed to twice the size they are in the white races, in whom they have to remove all, or nearly all, of it? Another peculiarity observed in the adrenals of the negro is that the cortical portion is deeply pigmented. This, in conjunction with the fact previously mentioned, that Stilling found excess of pigment in the adrenals of piebald animals, undoubtedly points to some relation between the adrenals and skin pigmentation. Without denying that the adrenals may exercise glandular functions, it is possible that they may act rather as receptacles for pigment than as purely excretory bodies. The description given by Stilling of the pigment-containing cells in the adrenals as star-like cells laying outside the walls of the capillaries, the pigment being limited to these cells, none being found in the gland cells, fits very closely with the description presently to be given of the pigment-carrying cells of the corium of the skin. The abstraction of pigment by such cells from the bloodvessels is probably distinct from any glandular function of the adrenals, and is more nearly allied to a general excessive activity of the pigment cells throughout the body. The deeply pigmented adrenals of the negro may be thus accounted for. In relation to the question of excretion of effete hæmoglobin products by the adrenals, repeated examinations of the urine were made in both my cases, with the view of ascertaining the presence of MacMunn's urohæmatoporphyrin. The urine was treated with neutral and basic lead acetates, and the precipitate was extracted with alcohol acidulated with sulphuric acid. In no instance were any absorption bands observed in the filtrate. It may therefore be inferred that no exceptional effete product of hæmoglobin is necessarily present in the urine of cases of Addison's disease. The accidental presence of such derivative is valueless as evidence of suppressed adrenal function.

Against the assumed presence in the blood of a toxic proteid (also the result of arrested function of the adrenals regarded solely as glands), which would occasion the asthenia, vomiting, and other symptoms, is the steadily progressive and prolonged character of the disease, lasting in many cases for years. There is no analogous condition of chronic auto-intoxication, the result of suppressed glandular function, which slowly depresses the vital energy and, as is usually the case in Addison's disease, causes death from asthenia. It is further to be remembered that the presence of a toxine or special proteid poison resulting from suppressed adrenal function is purely hypothetical; no satisfactory evidence of its existence has yet been given. The foregoing objections are equally applicable against the glandular theory of the adrenals as the cause of Addison's disease, whether these bodies are regarded solely as glands or as a combination of gland and nerve structure. We therefore pass on to the second standpoint from which, so far as the present discussion is concerned, the adrenals are considered solely as organs richly supplied with nerve structures.

[2] Handbuch der Path. Anatomie. [3] Ibid.

On developmental grounds the adrenals are classed amongst the ductless glands. Their intimate relation with both sympathetic and cerebro-spinal systems of nerves, however, justifies the position from which I am about to regard them. In addition to fibres in direct communication with the abdominal sympathetics and pneumogastrics, the adrenals contain multipolar nerve cells. Although there are ample anatomical grounds for explaining the causation of Addison's disease, on the assumption that certain morbid processes in the adrenals derange the functions of both systems of nerves, there is great difficulty in indicating even in an indefinite manner the *modus operandi*. The nerves with which the adrenals are in immediate relation are composite strands containing fibres from various sources, the functions of which are equally varied. Consequently the effects of irritation, or of paralysis, of these nerves cannot be estimated with the same precision that is possible in the case of the cerebro-spinal nerves. It is well known that the splanchnics command the largest vascular area of any of the vaso-motor nerves. Lewin[4] suggests that these nerves undergo such changes as to impair their function, and that in consequence the visceral bloodvessels would be dilated, and that form of intra-vascular hæmorrhage induced which depletes the rest of the system. The tissues specially affected by this withdrawal of blood are the brain and cord. Permanent depletion of these centres would account for the excessive lowering of energy, and in part for the feeble pulse, both characteristic of the disease. Irritation of the splanchnics, the sensory nerves of the intestines, causes severe local pain, such as frequently occurs in Addison's disease. It is to be observed, however, that in Addison's disease structural change in the splanchnics is by no means the rule; in many cases, including the two recorded by me, no microscopic change was found. Is it possible that persistent irritation of the nerve could induce permanent exhaustion without structural change? The remissions that occur from time to time during the progress of the disease in the pain, vomiting, prostration, and other symptoms—not necessarily simultaneously—probably have some relation to the morbid processes in the adrenals: in other words, are expressions of varying nerve irritation. To such variations may be referred the not unfrequently observed alternations of constipation with diarrhœa. Irritation of the pneumogastrics through their adrenal filaments is a probable cause of the attacks of vomiting. It is to be confessed, however, that much has to be granted in the building up of a hypothesis founded on conditions so little understood. The pigmentation of the skin in relation to abnormal nerve influence will be discussed separately.

The chief obstacles in the way of accepting morbid changes in the adrenals as the primary link in the causation of Addison's disease are that skin pigmentation occurs without disease of the adrenals, and that destructive lesions of the adrenals are not invariably followed by skin pigmentation. It is not to be inferred from this way of stating the question that skin pigmentation is regarded as the most important symptom of Addison's disease, but that the combination of symptoms thus named is not complete without skin pigmentation. As long as morbid changes in the adrenals are regarded only as antecedent factors in the causation of Addison's disease, the real causal agent being held to be structural changes in the semilunar ganglia, a satisfactory explanation is to hand. It is that Addison's disease results if the adrenal mischief sets up secondary changes in the semilunar ganglia, but not if the morbid processes are limited to the adrenals themselves. According to the view advocated in this paper the difficulty is more apparent than real. I hold that Addison's disease is due to abnormal nerve influence, and, in the great majority of cases, that structural changes in the adrenals is the initial cause; such changes may or may not be followed by secondary changes in the semilunar ganglia. The primary lesion, it is true, is a morbid process affecting the adrenals. The after-effects, however, are not due to damage sustained by the adrenals as glands, but to implication of the nerve elements they contain, and consequent alteration of function of certain portions of the nervous system with which they are intimately related. The first of the objections to this hypothesis—skin pigmentation without adrenal disease—is disposed of by allowing that exceptionally the nerve structures concerned may be implicated on the central side of the adrenals in morbid processes which do not affect those

[4] Charité Annalen, 1885.

bodies. In this way skin pigmentation without disease of the adrenals can be accounted for. Illustrative of this cause of skin pigmentation is Paget's case,[5] in which the adrenals were healthy; but the semilunar ganglia and solar plexus were embedded in a mass of enlarged glands, the skin being characteristically pigmented. It is not to be assumed, however, that pressure on the abdominal sympathetic or its ganglia will, as a matter of course, produce skin pigmentation. Merkel[6] states that he has seen the semilunar ganglia embedded in a slowly growing cancerous mass without a trace of skin pigmentation. Other cases of interference with the abdominal sympathetic by pressure of contiguous growths without skin pigmentation have been recorded. On the other hand, apart from Addison's disease, malignant abdominal disease not unfrequently gives rise to some degree of skin pigmentation. The second of the two objections—adrenal disease without skin pigmentation—is not so easily met. It might be reasonably expected that destructive lesions of the adrenals, of whatever type, would be followed by uniform results. Such is not the case. Sarcoma and cancer of the adrenals frequently occur without producing skin pigmentation. It has been suggested that when cancer attacks the adrenals it is frequently unilateral, hence the absence of pigmentation. Fenwick[7] has tabulated a number of cases of malignant disease of the adrenals without skin pigmentation, and states that one capsule only was attacked in a considerable proportion of them. On referring to Averbeck's[8] tables, however, I find that of nine cases of carcinoma of the adrenals in which the skin was pigmented five were unilateral, and of twenty-five cases in which the skin was not pigmented eighteen were bilateral; in three out of the twenty-five no statement is made as to whether they were double or single. A more satisfactory explanation appears to me that on which Wilks lays stress—chronicity. It is probable that the skin does not become pigmented until the adrenals have been diseased for a considerable time. The changes in the adrenals which are usually associated with skin pigmentation are of a chronic inflammatory type. It is highly probable that the two factors—time and the inflammatory nature of the morbid process—have much to do with the after-effects. When malignant disease attacks the adrenals, in the great majority of cases they are the seat of secondary deposits. It is probable in such cases that the patients are far advanced towards the lethal issue before the adrenals are attacked, and consequently the time factor would be wanting for the after-effects to develop. Of forty-two cases of malignant disease of the adrenals taken from Averbeck's tables, three are not specified as to whether they were primary or secondary, and in two other cases the patients died from intercurrent disease; this leaves thirty-seven cases, in thirty-three of which the disease was secondary. Whilst advancing this explanation, however, it is to be admitted that a few cases are on record which do not coincide with the data on which it is founded. Brinton,[9] Collier,[10] and Cagiati[11] record cases in which the adrenals were the seat of cretaceous degeneration without the skin being pigmented. The inconsistent behaviour of the adrenals when subjected to pathological changes has its parallel in that of another ductless gland. Extirpation of the thyroid gland has often been observed to be followed by myxœdema, so frequently that the name strumipriva has been given to this disease. Yet Billroth (quoted by Mosler[12]) states that of the many cases in which he has removed the thyroid he has seen none in which the operation was followed by myxœdema.

(To be concluded.)

[5] THE LANCET, vol. i. 1879.
[6] Von Ziemssen's Cyclopædia, vol. viii.
[7] Path. Trans., vol. xxxiii.
[8] Die Addison'sche Krankheit, 1869.
[9] Path. Trans., vol. ix.
[10] Ibid., vol. xxxix. [11] Riforma Med., 1890.
[12] Virchow's Arch., Bd. cxiv.

NEW DUFFERIN HOSPITAL, ALLAHABAD. — The Lieutenant-Governor formally opened this hospital on the 16th ult. In the main building the accommodation consists of the necessary administrative offices and wards for twenty-two patients. The subsidiary buildings contain four Zenana wards, suitable provision for female hospital assistant and four better class pupil nurses, and also for six pupils; dais and domestic offices. To guarantee the permanent maintenance of the hospital, additional funds are required.

A CASE OF ULCERATION OF THE TRACHEA PRODUCED BY INTUBATION.

BY J. WALTER CARR, M.D.LOND., M.R.C.P.,
ASSISTANT PHYSICIAN AND PATHOLOGIST TO THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

AT the present time, when intubation is on its trial in this country, it is of importance to note any evil results which it may produce, particularly any which experience may enable us to prevent in the future. From this point of view the following case may be instructive.

Herbert N——, a well-developed child two years and eight months old, was admitted to the Victoria Hospital for Children, Chelsea, on Nov. 22nd, 1890, with a history of illness since Nov. 18th. On admission the temperature was 100·6° F.; there was distinct diphtheritic membrane on the right tonsil, with considerable swelling of glands in the neck; no albumen in the urine. On Nov. 23rd the temperature rose to 102°, but was afterwards normal or subnormal until Dec. 3rd. On Nov. 27th membrane appeared on the left tonsil and on the posterior wall of the pharynx; still no albumen in the urine. On Dec. 2nd laryngeal symptoms (aphonia and stridulous cough and cry) appeared for the first time, and on Dec. 3rd the temperature again began to rise, varying from this time between 101° and 104·2°, which latter was reached shortly before death. On account of increasing dyspnœa, stridor, and recession of chest wall the child was intubated at 4.20 P.M. on Dec. 3rd with a tube for a child of two years, according to O'Dwyer's scale. This gave complete relief. It was coughed up two hours later, and the dyspnœa returning in about twenty minutes a tube for a child of three to four years was inserted with some difficulty, being noticed to fit tightly in the larynx. The dyspnœa was again quite relieved, and the tube was retained till Dec. 7th, when it was coughed out. Whilst it was being washed the child made violent but ineffectual efforts to clear the larynx, and became livid, but was at once relieved when the tube was replaced. It was then kept in until death, on Dec. 9th, six days altogether. The child gradually sank with increasing lung signs and symptoms; food was taken fairly well throughout, but occasionally caused some coughing. During the last few days albumen appeared in the urine, and at last amounted to one-half. At the necropsy extensive broncho-pneumonic changes were found in both lungs. The diphtheritic membrane had disappeared from the throat some days before death, but on the right tonsil was a large adherent slough, and in the left one a central cavity, from which a similar slough had evidently separated. There was no membrane in the larynx or trachea, but the entire mucous membrane presented a dirty greyish-white appearance, and in the larynx could be very readily peeled off from the cartilages. There was slight swelling over the arytenoid cartilages. In the centre and exactly on the top of the left aryteno epiglottic fold was a narrow ulcer about one-third of an inch long. At the upper end of the trachea, in the middle line in front, was a small circular ulcer, about a quarter of an inch in diameter, exposing the first ring. About half way down the front of the trachea, also in the middle line, was a larger ulcer, fully half an inch long by one-third broad, which had actually ulcerated through three of the cartilaginous rings, the ragged ends of which projected freely on each side into the lumen of the tube. The base of this ulcer was covered with an adherent slough. The other organs were healthy.

The case is of interest in the late commencement of the laryngeal symptoms, probably fourteen days after the onset of the disease. In Fagge's Medicine it is stated that "Jenner, in 1861, had never known the onset of laryngeal diphtheria delayed beyond the end of the first week; but Oertel says it is not infrequent on the eighth or tenth day, and may be as late as the thirteenth." The small ulcer on the left aryteno-epiglottic fold was probably due to the string attached to the intubation tube, which was kept in throughout, and fastened to the left side of the child's head. Ulcers similarly situated, and probably attributable to this cause, were described by Mr. Turney at the discussion on intubation at the Medical Society on Dec. 1st, 1890. Therefore, although the string is often a great convenience in withdrawing the tube, it is probably better not to leave it attached when the tube is worn for more than a day or two,

although in this case the resulting ulcer was so slight that it would probably have readily healed without causing any trouble. Mr. Pitts and Mr. Brook, in their paper read at the Medical Society,[1] say that "in all cases where the tube was expected to remain in for more than twelve hours the string was removed." The chief interest of the case, however, lies in the tracheal ulceration. The large lower ulcer exactly corresponded in position with the end of the intubation tube when *in situ*, and had evidently been produced by this, although the end was quite smooth and thoroughly well bevelled off. The cause of the small upper ulcer is less obvious, as although there is some lateral bulging of the tube in this situation, its anterior aspect is perfectly straight and smooth. Perhaps it is that the lumen of the trachea is narrowest here, as it is said to gradually increase in calibre from above downwards (Quain's Anatomy), so that a tube might just press against the first ring and escape those below. The ulceration did not cause any symptoms during life, and had probably nothing to do with the fatal issue, which seemed to be owing simply to the extension to the lungs of the inflammation started by the diphtheria in the large tubes; but, had the child escaped this danger, such extensive ulceration of the trachea might have proved a very serious complication later, as in the specimen from St. Thomas's Hospital, shown by Mr. Pitts at the Medical Society, in which a tube worn for four days produced tracheal ulceration, which probably led to gangrene of the lungs and death. The practical points to determine are—assuming that there is no defect in the shape of the tubes at present in use—how far was the ulceration due to the time the tube was retained, and how far to its size?

To take the former point first. Undoubtedly it is desirable to remove the tube as soon as possible, but the range and utility of intubation would be very seriously curtailed if a tube could only be retained with safety for a day or two. In the cases of laryngeal stenosis recorded by Mr. Pitts and Mr. Brook, a large tube was often worn continuously for many days, by one of the children frequently for a fortnight at a time, without any harm resulting; but then, as they point out, not only can a much larger tube be tolerated, and is desirable, than is laid down for the treatment of acute cases, but also in these chronic conditions the larynx and trachea are very tolerant of interference and pressure, which might have most serious results when applied to parts damaged by local acute inflammatory and diphtheritic processes, and with the general vitality greatly impaired by the constitutional disease. Nevertheless, there are now many cases on record of a tube being retained many days in laryngeal diphtheria without injurious results. Thus Dr. Wm. Hailes of Albany, U.S.A., has recorded successful cases in which the tube was worn for seven, ten, and twelve days respectively, and also mentions a case in which it was necessary to keep the tube in the larynx for twenty-three days without any ill effect, the patient recovering.[2] Dr. O'Dwyer mentions two cases in which the tube was in for ten days, and Dr. Waxham one in which it was retained for fourteen days without harm resulting. Moreover, in none of the children at the Victoria Hospital (some twelve in number), on whom a necropsy has been obtained in case of death after intubation has any trace of ulceration of the larynx or trachea been found, though it is true that in none was the tube worn nearly so long as in the case under consideration, though, judging from its size and depth, the ulcer in this case would in all probability have been well marked, even had death occurred some days earlier. In one case in which the tube was retained for five days and a half the necropsy was unfortunately refused. However, in the series of cases from the hospital recorded by Mr. Staveley,[3] there was one of diphtheria (No. 7), ending in recovery, in which the tube was worn for nine days, and the voice completely regained ten days later.

The one feature which, so far as I can ascertain, distinguishes the present case from all the others intubated at the hospital is the fact that for the age of the child a tube relatively too large was used. It has always been the custom to adhere strictly to the scale given by O'Dwyer; in this instance, when the first tube was coughed out, with rapid return of dyspnœa, a larger one was inserted, so as to prevent a repetition of this if possible, and so far with success, as it was only expelled once in the six days, but it was noted at the time of insertion to fit very tightly. It would be interesting to know if, in any other case where ulceration has been found—and I believe that at some hospitals it has been more frequent than at the Victoria,—any tube beyond the regulation size has been used. At any rate, for the present the practical lesson of the case seems to be that whilst it is always well to withdraw an intubation tube as early as possible, it is still more important, even at the risk of its being frequently coughed up, not to use too large a tube, especially if it is likely to be wanted for more than a few hours. Although in hospital practice this expulsion of the tube is of no great moment, in private practice, when the child would have to be left entirely in charge of a nurse, it might possibly be an important point, in considering the expediency of the operation, to remember that a tube so large as to be likely to be retained for a considerable time may very probably cause serious tracheal ulceration, whilst a smaller tube may be frequently expelled, and should this occur within the first few hours, urgent dyspnœa may probably return when there is no one at hand to replace it.

I have to thank my colleague Dr. Ridge Jones for permission to use the notes of the case during life.

[1] THE LANCET, Jan. 10th and 17th, 1891.
[2] Brit. Med. Jour., vol. i. 1890, p. 1186.
[3] THE LANCET, Nov. 9th and 16th 1889.

ON BILATERAL FACIAL PARALYSIS AS A FORM OF POLYNEURITIS.

BY JULIUS ALTHAUS, M.D., M.R.C.P. LOND.,
SENIOR PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S-PARK.

BILATERAL FACIAL PARALYSIS is an uncommon affection, of which only few cases are recorded in medical literature; and having recently met with two well-marked instances of it, I am induced to offer some remarks on the pathology and treatment of the disease. I shall not speak here of the surgical form of the malady which is seen after injury to the head, and on which Dr. Bristowe has written an able paper in THE LANCET for Jan. 6th, 1883, but shall confine myself to that form which arises from damage to the nerves by disease. In the two cases which I shall relate the affection was owing to neuritis of the portio dura in the lower portion of the Fallopian canal, and appeared to be part and parcel of a somewhat generalised polyneuritis. In the first case the illness was attributed to the sting of a poisonous insect; while the second case occurred during the influenza epidemic of last winter, and probably arose from infection with that virus.

The subject of the first case was a merchant, aged twenty-six, single, who was sent to me by Professor Strümpell of Erlangen; and the case has been described by that gentleman in the *Neurologische Centralblatt* for Nov. 1st, 1889. On comparing the notes of the history of the case, which I took at my first interview with the patient on May 1st, 1888, with the account given by Professor Strümpell, they are found to differ in a good many particulars, which shows once again that statements of patients cannot be always implicitly relied upon. Thus, the patient informed me that he was, while sitting in a garden, stung by an insect on Aug. 28th, 1887, while the Professor gives the date of this accident as October, 1887. As the first symptoms of paralysis appeared at the end of December of the same year this would give an interval of four months for my version and less than three months for the Professor's. I believe that in this instance the version given to me was the correct one, because more circumstantial; and the same applies probably to the locality of the sting, which, according to the Professor was, in the right hand, and according to my notes in the middle finger of the left hand. The patient also told me that the inflammation which supervened extended not only to the left arm and axilla, but spread to the right axilla, where the lymphatic glands were painful and swollen. Anyhow, it is certain that the patient, who had been in excellent health previously to that occurrence, and having neither syphilitic nor alcoholic antecedents, had a smart attack of lymphangitis, attended with feverish symptoms and loss of appetite. After a few weeks the inflammation subsided, and he felt better;

yet his health was not as good as it had been before, and glycosuria was found to exist, for which an anti-diabetic regimen was prescribed. On Dec. 29th, 1887, while abroad, the patient was suddenly, and without any apparent cause, taken with pain in both temples, giddiness, oppression on the chest, unsteadiness in walking, and difficulty in speaking. On Jan. 2nd, 1888, the pain had become much worse, had spread to the ears, arms, and legs. The patient could not sleep, and took to his bed on the following day. There was no fever, and the pulse was not accelerated. When Professor Strümpell saw him he noticed the symptoms of double facial paralysis and ataxy of the lower extremities. It appears from my notes that the left side of the face was first affected, and the right side soon afterwards. Although the patient had great difficulty in standing and walking, there was no actual paralysis of the limbs, but diminution of sensibility and ataxy of movements in the legs. The knee-jerk was found to be lost in both sides. The muscles of the legs responded well to electricity, but in the face the electric tests showed the signs of the reaction of degeneration. The patient was treated with mercurial inunction, galvanism, and saline baths. He was three weeks in bed. After a week there was some improvement, and in about six weeks the ataxy of the lower extremities had disappeared. In March the voluntary power began to return in the face, and the knee-jerk came back. I first saw him on May 1st, 1888, and found the signs of double facial paresis, affecting chiefly the eyelids and lips, with greatly diminished faradaic contractility, and increased galvano-muscular excitability (½ milliampère). In addition to this there was loss of taste in both sides of the tongue, but no tinnitus aurium or hyperacusis. The soft palate was not affected. The knee-jerk was normal, the urine contained a small quantity of sugar, and the patient had during his illness lost 35 lb. in weight. I treated him by a carefully regulated diet and systematic applications of the constant current, and in July of the same year he had almost entirely recovered. The urine contained then not a trace of sugar, and the only muscle which had not fully regained its strength was the orbicularis oris. The patient could "laugh and kiss," but could not whistle quite so well as before.

Professor Strümpell has not expressed any opinion as to the precise seat of the paralysing lesion in this case, but it seems to me quite clear that the paralytic symptoms, the electric tests, and the loss of taste on the one hand, and the absence of tinnitus and hyperacusis on the other hand, pointed to the lower portion of the Fallopian canal as the seat of the disease. The chorda tympani was evidently involved, while the stapedian nerve, higher up in the Fallopian canal, which supplies the laxator tympani muscle, had escaped the pathological influence. The question whether the sting of the insect really led to all the troubles which this patient experienced is difficult to answer definitely, but there is no inherent improbability in such a supposition. I have seen a case of epilepsy in a farmer, aged thirty, who had been in perfect health until he was one day stung by bees, which caused inflammation of the hand. He never recovered his health thoroughly after this, and nine months after the occurrence had his first epileptic fit, without any assignable cause. The occurrence of paralysis together with ataxy is not uncommon, and is seen in alcoholic and post-diphtheritic affections. The same cause may affect one set of nerves more than another, and the portio dura in the Fallopian canal may, for anatomical reasons, be more thoroughly compressed and squeezed by the effusion, and therefore suffer more severely in its functions, than the nerves of the lower extremities. That the ataxy was not owing to spinal disease, but to peripheral neuritis, would seem to be proved by the rapid recovery which the patient made both from the ataxy and, although in a less degree, likewise from the paralysis.

The second case was that of a clerk aged forty-five, single, whom I exhibited at the Clinical Society on May 23rd, 1890. He had never had syphilis, always been temperate, and had enjoyed excellent health. About the middle of March last he began to be troubled, without any apparent cause, and without any particular exposure to wet or cold, with severe pain all over the body and limbs, and more particularly in the arms and the lower portion of the back. The pain was constant, and prevented him from sleeping. There was no fever, but a considerable degree of prostration. After this had gone on for about three weeks he noticed one morning that his speech was becoming affected, that he had a difficulty in eating, that his food seemed to have lost all flavour, and that his face felt "fixed." His face had indeed changed to such an extent that his friends hardly recognised him, and told him that he looked as if he had been turned into stone. When I first saw him, on April 18th last, his expression was statuesque: the features were completely immovable, while the eyes and muscles of mastication had retained their power, and there was no anæsthesia in the face. The forehead was as smooth as if it had been ironed out, illustrating Romberg's remark that facial palsy is the best cosmetic, by making all the wrinkles disappear. The eyes were widely open, and he had lost the power to blink, while epiphora was marked, and led to dimness of sight; indeed, the patient complained of being unable to read for any length of time, although the structures of the eye were in their normal condition. Other special functions suffered likewise indirectly through the facial paralysis. Although the olfactory nerve was unaffected, yet the patient had lost the power of smelling through being unable to sniff, and the food had lost all its flavour, which made him say that for the taste of it he might just as well be eating sticks. This also deprived him of the enjoyment of his pipe, for, having been very fond of smoking for many years past, he had lately given it up, partly because he could not smell the smoke and partly because he experienced extreme difficulty in drawing it out of the pipe with his lips. The simple tastes, apart from flavours, were likewise affected. I tested the tongue with glycerine, quassia, table salt, and citric acid, and found that the taste of the acid was entirely lost, while it took him about six seconds before he realised the sweet, bitter, and salt. While the action of the temporal and masseter muscles had remained normal, yet there was such difficulty in eating, from paralysis of the buccinators, that he had to work hard for a quarter of an hour before he could dispose of a small piece of fish or bread-crumb. The morsel kept constantly falling out of his mouth, and the attempts to eat caused such fatigue that the patient eventually took nothing but slops; yet even drinking was difficult, as part of the liquid taken used to run out of the mouth. In consequence of these difficulties he lost greatly in weight, or, as he graphically expressed it, he had "from a waggon-load become a cart-load," and lost four inches round the waist. One of the most striking symptoms of the case, however, was the alteration in the speech. The patient could really not articulate at all, but seemed by great efforts to forcibly expel his words from the throat, and his speech was therefore so indistinct that it was hardly possible to make out what he meant. He had chief difficulty with the vowels a, e, u, and the labials. He could neither blow his nose nor spit; if attempting the latter, a tenacious mucus flowed slowly out of his mouth. He could blow out a lighted candle, but not, as one usually does, by puffing with the lips, but by a forcible expiration. The mouth was generally half open. The soft palate was not affected, and the sense of hearing normal. The electric tests showed complete loss of faradaic excitability of the nerves and muscles, loss of galvanic excitability of the nerves, and greatly increased galvanic excitability of the muscles (0·25 milliampère). There were no other symptoms of importance. The urine was of low density, 1010, the excretion of urea being diminished; it was fairly acid, and showed no trace of albumen or sugar or excess of phosphates. The knee-jerk was normal. I treated the patient first with salicylate of soda, and afterwards with antipyrin, which relieved the pain in the body and the limbs considerably, although it took some weeks before he was entirely free from pain. As his suffering had entailed considerable loss of strength I put him presently on quinine. The paralysis was treated by the constant current, of which more presently. The patient was about three months under my care, when he had so far recovered that the treatment could be discontinued. He called on me on Nov. 27th last, when the condition of the face was perfect and his health excellent.

As in the former case, it is difficult to speak with certainty about the cause of the neuritis in this patient. The severe pain in the body and limbs from which he suffered at the beginning of the illness and for some time afterwards looked at first sight like an attack of subacute rheumatism, and the facial palsy as owing to rheumatic neuritis of the portio dura. Since then, however, I have seen and read of a number of cases of acute nervous affections which had come on after, and

been clearly owing to, severe attacks of influenza, and it seems to me, therefore, much more likely, considering that the illness commenced during that epidemic, and that no exposure to wet or cold could be made out, that it was owing to infection with that virus. Severe pain in different parts of the body, probably owing to acute neuritis, has been the characteristic feature of many cases of influenza. From this point of view the pain about the body and limbs in the present case would have been owing to polyneuritis, which, although it affected the afferent nerves severely enough, did not lead to any trouble in the motor sphere, except in the case of the portio dura, where, for anatomical reasons, the pressure of the effusion on the nerve was greater than in the other parts which were affected. The localisation of the lesion in the present case appeared to be the same as in the first. It was clearly not central—that is to say, situated at any point between the pons and the cortex, because in central palsy only the muscles about the mouth are much affected. Nor could the disease be seated at the base of the brain, for where this occurs there is also deafness from affection of the portio mollis, but no loss of taste, as in the present case, since the portio dura carries gustatory fibres only during its course in the Fallopian canal. This symptom also showed that the affection was not seated in the external branches of the nerve, after this has emerged from the stylo-mastoid foramen, nor in the nucleus of the nerve in the medulla oblongata. Where this latter portion suffers the paralysis is confined to the lower branches of the nerve, for patients who are on the point of dying from bulbar paralysis can still express their feelings to some degree by movements of the upper portions of the face. As there was no hyperacusis, the stapedian nerve had evidently escaped injury; and the lesion could therefore be traced to the nerve in the lower portion of the Fallopian canal, involving the chorda tympani.

The prognosis is favourable in most forms of neuritis, except where it attacks highly specialised structures, such as the expansions of the optic and auditory nerves, which easily succumb to pressure by the effusion. The recuperative power of the ordinary peripheral nerves is indeed very great, especially when compared with the nerve cells of the grey matter. The natural tendency of the disease is therefore towards recovery, and this may be much aided by treatment. In the treatment of polyneuritis I should not resort to mercurial inunction, which was used in the first case, except if a specific cause could be clearly shown. Iodide of potassium, which is often prescribed, I believe to be quite useless in the treatment of such cases, but salicylate of soda and antipyrin (in ten grain doses) act beneficially in the first stage. After the inflammation has subsided, quinine should be given in hydrobromic acid. The most important part of the treatment of the palsy, however, is the cautious use of the constant galvanic current. It has been often stated that this agent should be reserved for the later stages of the complaint; but my experience is to the effect that it is most useful when resorted to in the beginning. We may then call into play the so-called catalytic effects of the current; and by doing so I have seen habitually a more perfect recovery at the end than where the electricity had only been used some months after the occurrence of the paralysis. The principal thing here is the mode of application, in which it is so easy to go astray. A powerful current is sure to do harm by aggravating the existing inflammation; while an exceedingly gentle force, such as we can measure with the greatest nicety with Edelmann's absolute galvanometer, appears at once to ease the circulations and to reduce the pressure of the effusion. I am in the habit of using about ½ to 1 milliampère with the anode resting on the mastoid process, and the cathode below the stylo-mastoid foramen, so as to embrace the diseased portion of the nerve for five minutes; after which a few cathodal passes, with the same current-strength, are made over the paralysed muscles. There can be no question that this is useful, because the patient at once expresses himself as relieved of the unpleasant feeling of stiffness about the face, and because the muscles that have been acted upon are seen to do their work much better after the application. This latter result is more especially seen in the muscles of the eyelids, where the immediate beneficial effect is often very striking. Perseverance with this treatment for two or three months is, however, generally necessary for securing a permanent result.

PLEURO-PNEUMONIC FEVER AT SCOTTER IN 1890.

THE SUPPOSED METHOD OF EXTENSION OF THE DISEASE TO NEIGHBOURING PLACES.

By T. B. FRANKLIN EMINSON, M.R.C.S., L.S.A.,
MEDICAL OFFICER OF THE SCOTTER DISTRICT OF THE GAINSBOROUGH UNION.

IT is a fact well known amongst farmers that certain seasons independently of climatic variations are especially prone to the production of mildews, blights, smuts, &c., while other seasons with similar weather are less liable to such pests. The hay harvest of 1889 was unusually fine in this neighbourhood, most of the hay being gathered without any rainfall, and the farmers looked forward to having good sweet fodder for winter use. In December, however, when the stacks were cut, a foot of outside was found full of mould, so that when disturbed the hay gave out clouds of whitish spore dust, enveloping the men so completely that they were sometimes invisible to each other. This mouldy condition extended, as I have said, about a foot into the stack all round—that is, wherever the outside air could readily penetrate, the inside of each stack being perfectly sweet and free from mould. Dampness is a common cause of mouldy hay after a wet hay harvest, but in that case the mould is found interspersed throughout the stack; this, however, was of a different nature, and gave rise to special remark as something out of the ordinary, the mould having attacked each stack after it was built. This was general in the neighbourhood of Scotter, and I tried vainly to meet with sound hay for my running horses, but I cannot say whether the same thing was observed in other districts.

The winter of 1889–90 was particularly open, and was followed by a spring of very unusual dryness, there being ninety-seven consecutive days during which the rainfall was considerably less than half the average amount, and forty-seven days, extending from March 24th to May 9th, during which the rainfall was just about one-fifth the average amount. It was in this latter period that the epidemic of pneumonia began and accomplished most of its task in Scotter. But what connexion is there between the pneumonia and mouldy hay? No direct, yet possibly some indirect, relation. The same seasonal peculiarity which favoured the production of this special mould in the dry, sweet, and well-gathered hay may perhaps have favoured the propagation and activity of the still more lowly life form—the pneumonia bacillus. It was evident that the mould spores were conveyed to the hay by the atmosphere, for the disease attacked only the outside, not the inside, as is usual when dampness is the cause, showing that the parent spores were filtered from the air as it penetrated into the substance of the stack, and then grew. May not this process suggest an explanation of how the pneumonia bacillus travelled from Scotter to Scotton, Messingham, and Laughton? During the forty-seven days of drought just mentioned, the south sewer must have contained much stagnant and semi-solid sewage, with dry islands standing up here and there. Sewer air is known to have been evolved freely, and in its passage over the dried sewage it would carry the specific germ into the outside atmosphere. May it not be possible that germs so given off, perhaps in great abundance, travel short distances through the atmosphere, reaching other scenes of operations, not perhaps in a condition to effect an entrance into the human system, but sufficiently active to escape extinction, provided they meet with suitable surface or sewer filth in which to thrive?

I venture to suggest that in some such way as this the pneumonia may have established itself in the villages immediately surrounding Scotter, and, if this be so, it would indicate some little relationship to that peregrinating disease, influenza—a relationship which the known like characters of the two diseases naturally call to mind.

Scotter, Lincolnshire.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

ROYAL FREE HOSPITAL.

JAUNDICE ACCOMPANYING SPECIFIC DISEASE; TYPHOID SYMPTOMS; DEATH; NECROPSY: ACUTE YELLOW ATROPHY OF LIVER.

(Under the care of Dr. SAINSBURY.)

ACUTE yellow atrophy of the liver or malignant jaundice is a disease which is rarely met with in the wards of our London hospitals, from whatever cause arising.[1] Cases seem to be much more common in Cuba and other tropical countries, as well as more frequently idiopathic in nature, than in more northern climates, for while only one case in 27,000 was met with at the London Fever Hospital, fifty-eight have been received in the Civil Hospital of Havana during a period of ten years. Dr. Martinez, from whose dissertation this statement is taken, finds the disease much more common in men, whereas in Europe the reverse appears to be the rule. It is a very interesting point in this case that the disease developed while the patient was undergoing mercurial treatment for the syphilitic state. Dr. Früs[2] has published two cases of very similar character. Jaundice came on three months after infection, and both patients died within a fortnight afterwards. Both patients had undergone mercurial inunction for the syphilis.

Ellen H——, aged thirty-four, widow, charwoman by occupation, was admitted into the Royal Free Hospital on Sept. 10th, 1890. On admission she was jaundiced, and complained of the presence of a rash on the body, of abdominal pain, loss of appetite, and weakness. Born in Devonshire, she came to London fourteen years ago. Nine years ago she went to Canada for a year as lady's maid; since this time she has lived in London. As a child she had measles, scarlet fever, and typhoid fever. At the age of nineteen she was laid up for three months with pain in the head and down the spine, and during a portion of this time there was palpitation of the heart. At twenty-three and again at twenty-four she suffered from bronchitis. In January, 1890, she had influenza, and has not been really well since. She has had three children, all born before full term. Two are delicate, and are said to be consumptive. Her husband died of consumption. The present illness began on July 22nd, with the appearance of a very red rash over the whole body. She accounted for this rash as being caused by drinking cold water when she was hot; this occurred on the day the rash appeared. During the next fourteen days she complained of vertical headache, of loss of appetite, and of being unfit for work; she kept her bed two days. Next (five weeks subsequently) her legs began to swell, and she found standing difficult; the swelling went down on resting. She then took to her bed (four weeks ago) and kept it for ten days. At the end of this time she felt stronger, and resumed her work, at which she continued till five days ago. On Monday, Sept. 1st (eleven days since) she was sick, and had diarrhœa. The vomiting continued till two days before admission, when it seems to have been cured by eating an apple. The vomit resembled whatever she had been eating. The diarrhœa lasted from three to four days; for the last four or five days the motions have been formed, and have resembled white clay. Jaundice set in on Sept. 3rd. On Sept. 8th she began to have pain across the upper part of the abdomen. There has been much thirst since the jaundice appeared. The urine has been much yellower since the jaundice. The "present state" showed a well-marked jaundice of somewhat brownish hue. On the neck and arms there were dark-reddish-brown patches running into one another here and there; the patches were desquamating slightly, they were not raised. On the chest were numerous coppery stains. On the abdomen scattered spots of a similar colour, but of a darker shade. There were anorexia, thirst, and a furred tongue, with unpleasant taste; the stools clay coloured; the abdomen tender all over, but not to any great degree; the liver enlarged, its lower margin reaching two inches below the costal margin (tip of ninth rib cartilage). The spleen could not be felt. Thoracic organs nothing abnormal. Pulse 68; respiration 25; temperature 99°. Urine brownish yellow, sp. gr. 1018, acid, no sugar, no albumen; gives bile reactions. The patient is much thinner now than before the influenza in January. She was put on milk and soda-water, and a bismuth mixture was prescribed. On Sept. 12th one grain of pulv. hydrarg. cum cretâ was ordered thrice daily. During the next few days there was much trouble with the bowels and abdominal pain, but by saline aperients the constipation was overcome and the abdominal pain then became much better. The rash meanwhile had improved. Then for a few days vomiting became troublesome, and nausea was almost constant. On Sept. 26th the vomiting had ceased. Patient now complained of the great irritability of the rash. Then there was a return of the sickness and nausea, with flatulent distension of abdomen; and again the patient complained of abominal pain and of pain in the back; next a remission of these symptoms, and in this way the case proceeded. The abdominal pain was at times very severe, and on more than one occasion required the use of hypodermic injections of morphia and fomentations. On Oct. 3rd she complained of swelling of the hands and feet. This symptom, an actual œdema, lasted a few days, but is not mentioned after the 7th. On the 22nd a dulness in the flanks and hypogastrium, obviously due to fluid in the peritoneal sac, is recorded. This ascites was, however, noticed a few days previously. On the 27th there was much swelling of the left side of the face; it was accompanied by an aching pain. On the 30th the face was still swollen and the ascites had apparently increased. On this day the tongue was brown and dry and this symptom was yet more marked on the 31st. On Nov. 1st there was epistaxis, and this was repeated on the 3rd and 4th. During these days the condition became distinctly typhoid. On the 5th the patient was semi-conscious during the night and part of the morning. Death occurred at 11.30 A.M. The jaundice varied very little throughout the progress of the case; at one time it is noted as being of somewhat lighter colour, at another time as being darker. The stools on Oct. 3rd are said to have contained bile for the first time, and on the 6th to be more deeply tinged, but practically there was but little change in this symptom. The urine on admission contained no albumen, but on Oct. 10th, 14th, and doubtfully on the 17th it contained albumen. Subsequently the albumen again disappeared. Throughout it gave Gmelin's test for bile. In general it was thick. On one occasion a dense greenish sediment was observed; the urine on this occasion was examined for leucin and tyrosin, but with negative results. The reaction was acid throughout. The vomit on Sept. 24th was greenish with a coffee-ground admixture. On Oct. 10th the vomit was colourless.

Necropsy.—The body was emaciated and uniformly stained a dull brownish-yellow. The abdomen was prominent. The peritoneal sac contained a considerable quantity of brownish-yellow serum, and this filled the pelvis and the right hypochondrium. The left hypochondrium was occupied by the distended stomach, and the rest of the abdomen, front and flanks, was occupied by moderately distended intestines. The diaphragm stood high on the right side. The liver was small and lay against the spine; it was separated by a considerable interval from the chest wall. The stomach contained a considerable quantity of fluid, consisting in part of tarry matter. The walls were dotted with black spots (hæmorrhagic). There was no ulceration. In the duodenum was a similar fluid. The intestines (large) contained pale greyish-white fæces. The mucous membrane of the large gut was injected; its walls somewhat thickened. The liver weighed 31 oz.; it presented (by gaslight) a dark-brown mottled appearance, and on section the normal lobulated structure was absent. Seen next day a fresh section through the posterior parts of the right lobe showed a mottled brownish-yellow appearance, whilst anteriorly the right lobe and section through the left lobe showed a reddish colour and a dense but to some extent lobulated structure. The liver substance was very firm. Scrapings

[1] THE LANCET, vol. i. 1889, p. 284. [2] Sajous, vol. i., c. 34, 1890.

from the surface showed under the microscope much fatty débris, with numerous cells in an advanced stage of fatty degeneration. No crystals were seen. The portal fissure was quite free from mucus. The common bile-duct was quite patent, a director passing easily into the bowel. The pancreas was extremely firm, almost cartilaginous in hardness, but otherwise quite normal in appearance. Kidneys (7 oz. each) and spleen (11 oz.) were very firm. Thorax: There was slight excess of fluid in the pleural sacs, with some collapse of lungs posteriorly. Lungs emphysematous. Heart normal. The microscope showed the almost complete replacement, in portions of the liver, of the normal structure by a close fibrous texture, which suggests a collapsed and thickened meshwork, very rich in small nucleated cells. Here and there in this fibrous texture were foci of round cells more closely congregated. In other portions of the liver the lobules of hepatic cells could still be seen, but the cells showed an advanced fatty degeneration, and the lobules were in many places much encroached upon by a dense round-celled infiltration. The pancreas was fibrous in appearance, but there was no suggestion of new growth. The kidneys showed nothing of note under the microscope.

Remarks by Dr. SAINSBURY.—The points which call for notice in this case are—1. The occurrence of jaundice in the presence of a skin eruption, which in its characters was strongly suggestive of specific disease, though no history of infection was obtained. The relation between syphilis and jaundice is admitted, and "now and then what appears to be at first a slight catarrhal jaundice becomes rapidly developed into the symptoms of acute atrophy" in time.[4] 2. The presence of ascites without the discovery of any pressure on the trunk or main branches of the portal vein. Query, was the acute round-celled infiltration of the liver sufficiently widespread and sufficiently acute to determine this dropsy? Clinically it is of interest to note that the accumulation of fluid in the right hypochondrium noted at the time of the necropsy would and did mark the diminution of the liver. I have not found mention of ascites as a complication of acute yellow atrophy, and desire to lay further stress upon it, because it raised doubts as to the possibility of acute yellow atrophy, which had been considered, and because for this reason the examination of the urine for leucin and tyrosin was not made systematically. 3. The enlargement of the liver on admission. This was undoubted. 4. The absence of bile from the stools, except in one or two instances. 5. The appearance of albumen in the urine during the progress of the case, and then its disappearance. The other features were the usual ones. The hæmorrhagic tendency, however, did not become marked till the last three days. On Sept. 24th, soon after the patient's admission, there was some coffee-ground vomiting. The swelling of the hands and feet and of the face I am unable to account for. That of the hands and feet was not marked, and not permanent. The swelling of the face was painful in the first instance; it subsided subsequently.

GENERAL HOSPITAL, NOTTINGHAM.

A CASE OF CANCER OF THE PYLORUS; GASTRO-ENTEROSTOMY; RECOVERY.

(Under the care of Dr. BROOKHOUSE and Mr. OWEN TAYLOR.)

EVIDENCE as to the amount of benefit to be expected by a patient suffering from cancerous disease of the pylorus who submits to the operation of gastro-enterostomy is accumulating month by month. Although it is probable that all the operations which have been performed have not been brought before the profession, enough has been written to prove the value of gastro-enterostomy in selected cases for the relief of some of the symptoms which cause most distress. Mr. Page,[1] in a paper read before the Medico-Chirurgical Society, gave a series of thirty-six cases of the operation; of these, fifteen were fatal directly or indirectly from the operation; death was usually from collapse. In the first eighteen cases there were ten deaths, and in the second eighteen only five deaths. We have published accounts of six cases since the date of that paper.[2] Of these, two recovered and four died. In the two successful cases Senn's bone plates were used, and the operation thus rendered of as short duration as possible; further, in both feeding by the mouth was commenced at very early date—on the second day. In this patient success was also attained by means of a rapid aseptic operation and early feeding by the mouth, and the importance of these factors in a successful operation must be fully recognised. We need statistics showing the duration of life after the operation. The account of the following case is from notes by Mr. J. P. Gray, resident surgical officer:—

N. G——, aged fifty-six, a miner, was admitted into hospital on Sept. 26th, under Dr. Brookhouse. For six months before admission he had suffered from digestive troubles, pain after food, and occasional vomiting, which gradually got worse. He was losing weight steadily. Nine months before, he had been weighed and scaled 9 st. 10 lb., and six weeks before admission he had only weighed 8 st. 10 lb. On admission he weighed 8 st. 5 lb. He is a small man, of sallow complexion, with a miner's stoop, very thin. He takes food readily and with relish, but has a dull pain all over the abdomen, and vomits about once a day, occasionally missing one day, and sometimes vomiting more than once a day. He generally brings up several pints of frothy fluid, found to contain sarcinæ. On examination of his abdomen, a sausage-shaped tumour, the size of a hen's egg, was found in the right hypochondriac and umbilical regions, movable within small limits. The greater part of the left side of the abdomen was prominent, the bulging reaching as low down as midway between the umbilicus and pubes, and extending across the middle line with a lower curved edge leading up to the above-described tumour. This area on percussion gave a stomach note, and a succussion splash could also be obtained over it. The diagnosis made from these signs was cancer of the pylorus, with a greatly dilated stomach. His stomach was emptied and washed out with warm water once a day, with considerable relief to his uneasiness; but he steadily grew worse in condition, and during one week lost close upon a stone in weight. Accordingly, on Oct. 26th, the operation of gastro-enterostomy with Senn's plates was performed by Mr. Owen Taylor. The patient then weighed only 7 st. 2½ lb. Before the operation his stomach was washed out with warm water, and an enema of 1 oz. of brandy with 3 oz. of water administered. There was nothing particularly worth noting in the operation. The fingers of an assistant were found better than Makin's clamps for holding the emptied gut. Some little difficulty was experienced in tying the two lower lateral sutures. Several Czerny-Lembert sutures were also put in at the end. The patient took the A.C.E. mixture badly, and had several hypodermic injections of brandy during the operation, which lasted thirty-five minutes. He was in a very critical condition after the operation, and during the next day vomited three times, the vomit consisting of dark blood with a strong fæcal odour. For two days he was fed by enemata of pancreatised milk with brandy and egg, with an enema of tepid water every morning. He retained them very well. On the second day he had milk-and-water in teaspoonfuls, the enemata being continued. On the third day Brand's essence was given in small quantities. By the ninth day he took everything by mouth, and the enemata were discontinued. The stitches were taken out on the sixth day, and he made a continuous recovery—interrupted, however, by the abdominal wound giving way and gaping for about two inches, though it had been apparently healed in the sixth day. This, however, gave rise to no serious symptoms. The edges were refreshed and sewn up again. On the thirteenth day he was put on meat and rice pudding. He got up three weeks after the operation, and was found to have gained 5½ lb. in weight. He was very constipated, but his fæces contained bile. The stomach reaches now to the level of the umbilicus. He continued to gain in weight, and was discharged in six weeks' time, taking ordinary diet.

[4] Murchison, second edition, p. 266. See also Fagge (Principl of Medicine) and Hutchinson (Syphilis, p. 145, case of Dr. Wilks)

[1] THE LANCET, vol. ii. 1889, p. 986.

[2] THE LANCET, vol. ii. 1890, Mr. Jessett, p. 68; Mr. Beatson, p. 762; Mr. Clarke, p. 1213; THE LANCET, vol. i. 1891, Mr. Barrow.

GUY'S HOSPITAL.—Mr. Fred. Gowland Hopkins, B Sc. Lond., has been appointed to the studentship in pathology lately established at Guy's Hospital by Sir Cameron Gull in memory of his distinguished father, the late Sir William Gull.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

The Administration and Use of Peroxide of Hydrogen.

AN ordinary meeting of this Society was held on March 23rd, Mr. Reginald Harrison, Vice-President, in the chair.

Dr. B. W. RICHARDSON read a paper on Peroxide of Hydrogen and the Various Methods for its Administration and Use, the first portion of which we publish in another part of our present issue.

Mr. REGINALD HARRISON, referring to the composition and use of "sanitas," which contained peroxide of hydrogen in combination with turpentine, said that he had found it of much use as a bladder wash in cases of chronic cystitis, especially after lithotrity and in instances where the walls of the bladder were encrusted with phosphates. He usually prescribed it diluted with from six to twelve times its volume of water.

Mr. BRYANT had had experience of the use of peroxide of hydrogen rather as a local application than as a medicine. He had used it largely in ten-volume solution for the last three years. The first case in which he applied it was one of suppuration about the scrotum in association with tubercular testis. There were a great many sinuses, and the patient was old and refused operation. He repeatedly injected a solution of five-volume strength into the sinuses, and a material came out which was at first like yeast, but was afterwards quite clear. After using it three or four times the sinuses closed and the patient got quite well. The second case in which he tried it was one of suppurating tracts in the gluteal region, following a gluteal abscess, in a middle-aged man who had no rectal, vesical, or bone disease. The sinuses were long, and led into the pelvis; they were treated by the ten-volume solution, and, after about half a dozen syringings, in the course of four weeks the patient was quite well. The third case was one of extensive sinuses running up behind the rectum, and it was doubtful whether they communicated with the gut; this patient also made a good recovery after injection. A fourth case was one of very numerous sinuses about the breast, which, being treated in the same way, led to a similarly favourable result. Six weeks ago he saw a young woman of twenty-four, who, after a chill, complained of pelvic pain, and was very ill with typhoid symptoms for a month. He found a large tumour springing from the pelvis, approaching the umbilicus and causing obstruction of the bowels. Under chloroform he made an opening through the posterior cul-de-sac of the vagina, and evacuated more than a quart of fetid pus. He then thoroughly irrigated the cavity with the peroxide solution, and this was continued regularly for some time afterwards. The temperature at once fell to normal; at the end of a week the drainage-tube was pushed out and she was at the present time quite well. Such a result surpassed his greatest expectations. He had found it also of great use in large spinal abscesses: it reduced the fluid which exuded from these to a condition almost like that of serum—a result which he had not found to be brought about by any other antiseptic. Its especial value would certainly be found in the treatment of suppurating tracts and abscess cavities.

Dr. LITTLE asked if the author believed the remedy acted in angina pectoris by reducing spasm.

Mr. SPENCER WATSON said that it had been used in America for the purpose of diagnosing suppuration within the antrum, a white foam filling the nostrils if pus were present when the peroxide was introduced.

Mr. SHEILD said that he lately used it with the best results in a number of cases of putrid and offensive otorrhœa. In one case of mastoid abscess it controlled the odour and reduced the discharge in a remarkable way.

Dr. ROUTH had employed it in phthisis, in which disease he thought that it was as beneficial as cod-liver oil. He had likewise given it in pneumonia where cyanosis was present, and had found it of much value in cases of exhaustion from chronic discharges or over-work.

Dr. RICHARDSON, in reply, said that he thought Mr. Bryant had alluded to the class of cases in which the peroxide would be found most useful. There could be no harm in extending its application to cases of typhoid fever where there was persistent discharge and much flatulence. It would likewise be safe to inject it into pulmonary cavities. He administered it by inhalation in angina, which he thought was perhaps a neuralgia rather than a spasm. It was interesting to watch under the microscope the way in which the peroxide produced disintegration of pus-corpuscles.

OPHTHALMOLOGICAL SOCIETY.

The Glands of the Ciliary Body in the Human Eye—Hydrophthalmos.—Hunterian Chancre on the Ocular Conjunctiva.—Operation for Ectropion.

AN ordinary meeting of the above Society was held on March 12th, the President, Mr. Henry Power, F.R.C.S., in the chair.

Mr. TREACHER COLLINS read a paper on the Glands of the Ciliary Body in the Human Eye. He first briefly referred to the experiments of Deutschmann, Schoeler, Uhthoff, Leplat, and Nicati, as proving that the aqueous humour and the nutrient fluid of the vitreous were secreted in the ciliary region. He then described a method of bleaching sections of the eye with chlorine. From the examination of sections thus treated, he found that the uveal pigment layer from the root of the iris to the ora serrata was composed of a single row of somewhat flattened cells, projecting from the outer surface of which were numerous processes, each composed of a group of cells. These were largest and most numerous at the junction of the plicated and non-plicated parts of the ciliary body, where they were pear-shaped. Examination of sections of them cut transversely showed them to be tubular, with a small central lumen. These tubular processes, he thought, could be nothing else than secreting glands concerned in the elaboration of the aqueous humour and nutrient fluids of the vitreous. So-called serous iritis he regarded as primarily a catarrhal inflammation of these glands. The whole course of the disease, he thought, pointed in this direction, and the histological appearances of eyes lost from it were quite in keeping with this view—there being some increase in the size of the glands, some irregularity and proliferation of their epithelium, enlargement of the bloodvessels in their vicinity, and a variable amount of round-celled infiltration about them. When inflammation of the ciliary body had been of a more plastic character, there was considerable overgrowth of its uveal pigment layer, in which overgrowth the cells were arranged in the form of cylindrical tubes just like tubular glands. He mentioned a case of tumour of the ciliary body described by Alt, which he regarded as an adenoma, and another growing in the same region which he considered to be a glandular carcinoma. The histological points referred to in his paper were afterwards illustrated by lantern slides made from photographs of microscopical sections.—The PRESIDENT considered Mr. Collins' paper was one of very great interest, and proved that there were still parts of the eye which would repay careful examination; he thought such an investigation as that described might lead to an increase in our knowledge of glaucoma.—Mr. PRIESTLEY SMITH referred to the early descriptions of the ciliary body, and stated that Mackenzie as long ago as 1835 attributed to it the function of secreting fluid into the vitreous and aqueous chambers, which had since been confirmed by experiment. He suggested the advisability of using the term "serous cyclitis" instead of serous iritis, as had been done already in modern German works.—Mr. JESSOP drew attention to the difference in the character of the fluid obtained from the anterior chamber by a first and subsequent tapping, that obtained by the second tapping containing more proteid material.—Mr. COLLINS, in reply, said that he had examined a large number of glaucomatous eyes in reference to ciliary body changes, and had found no obvious alteration in the glands described, except that in cases of long standing they shared in the general atrophy.

Mr. F. R. CROSS (Bristol) read a paper on Hydrophthalmos, in which he first made reference to recorded cases and descriptions by writers of fifty years ago, and commented upon the gradual development of knowledge of the subject. In recent text-books but little space is given to any variety of hydrophthalmos. Some authors deal with the condition as only congenital, others as though its consideration could be adequately completed by treating it under the head of "secondary glaucoma." Excess of intra-

ocular pressure produces some expansion in any healthy sclerotic coat, but the maximum of expansion is soon reached. During the growth of the eyeball, and to some extent up to early adult life, continuous high intra-ocular pressure is accompanied by distension and thinning of the fibrous coats, with stretching and modification of the uveal tract and retina; while in later years, after senile and retrogressive changes have occurred, the sclera resists a high degree of intraocular pressure for months without progressive distension (P. Smith). Glaucoma before the age of thirty is rare, and before the age of twenty extremely so. A few cases have been published, several in eyes distinctly microphthalmic, and in others the corneal measurement has been found below the normal standard (11 to 12 millimetres, P. Smith). On the other hand, hydrophthalmos almost always commences, whatever be its cause, in childhood. It may begin in early adult life, while the tissues of the eye are still extensile. It never commences in middle life, but when it is protracted to this period the symptoms tend towards the glaucomatous type. Anything which causes excess of blood in the eye, venous or arterial, or imperfect lymphatic outflow, tends to raise the intra-ocular pressure, and such conditions produce in the adult eye glaucoma, in the youthful eye hydrophthalmos. Dufour regards the condition as one of primary glaucoma, and he accounts for the open filtration angle and deep anterior chamber by weakening of the zonule of Zinn, and yielding of the corneo-scleral ring, thus allowing of easy passage of the intra-ocular fluids, and an equal pressure in both aqueous and vitreous chambers. The author considers that the cases apparently congenital in origin may depend upon error in development, or upon intra-uterine inflammation, but thinks that in some the morbid condition really commences after birth, or may be a true primary glaucoma during childhood, and that undoubtedly many which can only be classed as hydrophthalmos are true cases of secondary glaucoma, traumatic or otherwise. Several observers have described the microscopical characters found in buphthalmos, but the pathological changes are probably as much the result of intra-ocular pressure as its cause. The primary seat of inflammation seems to be in the ciliary body, at the base of the iris, with implication of the limbus corneæ and the filtration channels. Weakness of the zonule, distension of the lens capsule, and lenticular trouble might also easily arise, with modification of the intra-ocular fluids, and interference with their proper transudation. Dürer and Schligtendal, in a recent account of the microscopical examination of five eyes affected with congenital (so-called) hydrophthalmos, draw special attention to the condition of the uveal tract. In all these cases both choroid and ciliary bodies were found markedly atrophied; the venæ vorticosæ were extremely narrowed in their passage through the sclerotic, while their tributaries in the supra-choroidea were dilated and varicose. In some of the cases dilatation of the large veins and atrophy of the tissues alone existed, whilst in the others there was distinct evidence of inflammation, especially in the region of the posterior aqueous chamber. Increased vascularity and round-celled infiltration were found in the corneo-scleral margin. Schlemm's canal, Fontana's spaces, and the anterior ciliary veins were usually narrowed or obliterated. The term "buphthalmos" should only be applied to cases in which the prominent cornea is surrounded by a thinned blue-tinged sclera, while the term "megalophthalmos" might be retained for cases in which the hypertrophied staring eye is otherwise normal. The history of the case will determine when it should properly be called congenital. Mr. Cross read histories of two cases of hydrophthalmos, one associated with a high degree of myopia, the other dependent on blockage of the filtration angle by a dislocated lens; and of five cases of buphthalmos (the exaggerated form of hydrophthalmos), one probably congenital, one commencing in early life, and three secondary to *iris bombé*, or perforating wounds of the cornea.—Dr. ARGYLL ROBERTSON remarked that under the heading of "hydrophthalmos," Mr. Cross included cases which differed in some particulars, although they had in common the distension of the anterior parts of the eyeball. He mentioned a family under his care in whom the mother and three children were affected with this disease; in one child the condition was unilateral.

The following living cases were shown:—

Mr. LANG: Hunterian Chancre on Ocular Conjunctiva.

Mr. TWEEDY: Result of Operation for Ectropion of Lower Lid following burn.

At the general meeting held subsequently it was resolved that the date of the Bowman lecture be altered from November to the first Thursday in July, subject to the discretion of the Council. Also that an illuminated address be presented to Professor Helmholtz congratulating him on the attainment of his eightieth birthday, and acknowledging the value of his services to ophthalmic science. Mr. TWEEDY moved a resolution, which was carried, to the effect that, in view of the extension of the curriculum to five years, the subject of ophthalmic surgery should be made compulsory, and a committee was nominated composed of past-presidents of the Society and representatives of the Scotch and Irish Universities to urge the matter on the Medical Council.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on Wednesday, Feb. 18th, W. Ross Jordan, M.R.C.S., in the chair.

Aphemia.—Dr. T. STACEY WILSON showed a man aged fifty-one who was suffering from a third attack of Aphemia. The first attack, which occurred in 1885, was accompanied by a slight degree of word blindness, and he remained absolutely dumb for eleven months. He then suddenly and completely recovered his speech, and remained perfectly well till January, 1890, when he again lost his speech. On this occasion there was, just as during the first attack, much headache and some fever. He regained his speech in thirteen weeks, however, thanks to a sudden fright that he had. He lost his speech for the third time last August in just the same way as on previous occasions, and his present condition is one of absolute mutism, although in the possession of all his other faculties. Dr. Stacey Wilson pointed out that the case at the present time might be considered to be practically one of hysterical mutism, and that some sufficiently powerful and correctly directed external stimulus was all that was necessary to put the patient's motor speech centre once more under his control.

Rodent Ulcer of Eyelids.—Mr. WOOD WHITE exhibited a man aged fifty-three who, five years before, had been struck on the upper eyelid by a piece of wood. The wound never healed, but, according to the patient's statement, "seemed to ulcerate and go on wasting." It continued thus for two years before it spread to neighbouring parts. All previous wounds healed readily. Nine months ago the man was first seen by Mr. Wood White. The eyelids were then much thickened and infiltrated, especially near their margins. The palprebal aperture was reduced in size and the eyeball pushed backward, but there was no sign of ulceration. The patient was again seen a week ago, when the appearances were much altered. The infiltration had spread upwards as far as the eyebrow, and downwards for some distance over the cheek. Its margin was well defined, and it left the skin in an atrophied and scarred state, but there was still a remarkable absence of ulceration.

Foreign Body in the Eyeball.—Mr. WOOD WHITE showed a patient who had received a penetrating wound of the eyeball from a piece of bell metal. The vitreous was perfectly clear, and the details of the fundus could be well seen. The foreign body was adherent to the retina on the inner side a short distance behind the ciliary processes, and was projecting into the vitreous; the reflex from it was bright and glistening. It had been in the eye for several days, but there was no sign of redness or inflammation. Bell metal being a composition of iron, brass, and glass, and the piece being firmly fixed in the globe, the electro-magnet had not been used.

Deformity of Pelvis.—Dr. PURSLOW showed a patient with Rickety Deformity of Pelvis, for whom he had performed craniotomy in the out-door maternity of the Queen's Hospital. She had been in labour twenty-four hours. Version had been performed by the obstetric house-surgeon who had been called to the case two hours previously, and when seen by Dr. Purslow the feet of the child were protruding and the cord pulseless, but the head was not engaged in brim; the occiput was lying to the left side. The head was perforated behind the right ear and delivered by the aid of the crochet, though not without difficulty, after evacuating the brain. The patient made a rapid recovery without a single bad symptom. The diagonal conjugate measured by the hand while the patient was under chloroform = 3½ in. True conjugate, allowing for shape of pubes, not more than 2½ in.

Paper.—Dr. FOXWELL read a paper on the Heart Murmurs in Anæmia.

Reviews and Notices of Books.

Hypnotism. By Dr. ALBERT MOLL (Berlin). Contemporary Science Series. London: Walter Scott.

Hypnotism, or Psycho-Therapeutics. By R. W. FELKIN, M.D., F.R.S.E. Edinburgh and London: Young J. Pentland.

Should Hypnotism have a Recognised Place in Ordinary Therapeutics? By NORMAN KERR, M.D., F.L.S. H. K. Lewis.

[FIRST NOTICE.]

THE literature of hypnotism grows apace. We have here three *brochures* upon the subject, and, whatever reserves may remain in our mind, there can be no doubt that their perusal is calculated to elucidate many obscure problems, to enlarge our conceptions of the action of mind upon physical function, and to place forcibly before us the claims which hypnotism is now loudly making for recognition both in the domain of psychology and of therapeutics. The impartial reader will probably rise from their perusal feeling that the time has gone by when the *facts* of hypnotism could be legitimately questioned, and that what now remains is rather the interpretation of those facts and the determination of their due relation to the science of mind and the art of healing.

Dr. Moll's work, which is much the most thorough and elaborate of the three, is the production of a thoroughgoing adherent and enthusiastic exponent of the doctrine and practice. Dr. Felkin's shorter and slighter work is also almost wholly favourable in tone; while Dr. Norman Kerr's pamphlet, which is a reprint of the address delivered by him at the last meeting of the British Medical Association in Birmingham, is an emphatic protest against the admission of hypnotism within the recognised domain of therapeutics. We shall notice the three in turn, and shall aim at presenting a fair *résumé* of the facts and deductions of their authors, rather than at assuming any dogmatic position of our own. While the subject of hypnotism cannot be called new, it nevertheless presents many and peculiar difficulties, and we see nothing to regret in the attitude of reserve which has hitherto been maintained towards it by the medical profession in this country. If we could say what mind is and what body is, and what are their relations the one to the other, then the phenomena of hypnotism might admit of a ready explanation; but these questions are really insoluble in the present state of our knowledge, and the solutions which are offered are verbal only. Hence if hypnotism often baffles us and defies our attempts at a thorough analysis, this is only what, from the nature of the case, might have been fairly expected.

Dr. Moll opens with a historical review of the subject, and points out that while traces of hypnotism can be found among the ancient Egyptians and other Oriental nations, and while it and kindred phenomena were studied by Paracelsus and Van Helmont in the Middle Ages, universal attention was first drawn to the subject by Mesmer (1734—1815). The career of Mesmer is characterised by a curious medley of science and chicane, and into its merits and demerits, successes and failures, we have not space to enter. Mesmer believed in animal magnetism and in metallo-therapeutics. His well-known *baquet* at Paris (a sort of oak chest or tub, with appendages of iron) was supposed to be magnetised by him, and to be able to give forth virtue of itself. Several commissions sat to consider the doctrines of Mesmer, and their reports were in the main hostile, most authorities attributing the alleged phenomena solely to the operation of the imagination. In Germany "animal magnetism" was studied by Lavater, Wienholt, Heineken, Böckmann, Gmelin, and others. Selle of Berlin admitted the genuineness of some of the alleged phenomena, but excluded all that was supernormal (clairvoyance). Two currents of thought on the subject were perceptible, one critical and scientific, the other mystical. Early in the present century the Abbé Faria, in his teaching in Paris, practically anticipated the modern doctrine of hypnotism when he showed that no unknown force was necessary for the production of the phenomena; that the cause of the hypnotic sleep was in the person who was to be sent to sleep; that everything was subjective. In England the chief name is that of Braid of Manchester, who about the year 1841 induced cataleptic conditions by making the patient fix his eyes steadily upon some object, and who first gave to these phenomena the term "hypnotism." Braid was inclined to draw a distinction between hypnotism and mesmerism. A little later Grimes in America expounded similar doctrines, and gave to the states produced the term "electro-biological." Modern hypnotism, with its doctrine of the influence of "suggestion," dates from Liébeault, who became the founder of the Nancy school, and whose work, entitled "Du Sommeil," published in 1866, contains the germs of all recent theories upon the subject. In 1878 Charcot began his public classes, in which he directed attention to the physical states of hystero-epileptics during hypnosis. Since that time Bernheim, Beaunis, and Liégeois in France, Van Reuterghem in Holland, Wetterstrand in Stockholm, Forel in Switzerland, and Heidenhain, Berger, Weinhold, Opitz, and many others in Germany have occupied themselves with the subject. Recent investigations have taken one of two directions—viz, the determination of the place and value of hypnotism in therapeutics, and the utilising of it for the founding of experimental psychology.

The general phenomena of hypnotism and the various methods of inducing the hypnotic sleep are passed in review by Dr. Moll, but are probably sufficiently familiar to our readers. We may draw attention to the fact that the school of Nancy proceed by the method of "suggestion" rather than by the procedure of Mesmer or Braid—i.e., the various hypnotic phenomena are "suggested" to the patient by verbal descriptions, and no attempt is made to fatigue the senses by fixed attention, revolving mirrors, or the like. It is important to distinguish these two methods, which are fundamentally distinct. The former attains its end by physical, the latter by psychical means. The latter, or the method of Liébeault, is said to be free from some of the unpleasant after phenomena which sometimes accompany the method of Braid. When the latter plan is adopted, certain stimuli are applied to the senses of sight, hearing, and touch. Taste and smell have been rarely tried, and have generally given negative results. A revolving mirror, the ticking of a watch, the sudden ray of the Drummond light, the loud noise of a gong, contact with hot plates of metal, are among the means that have been adopted. It is always a question, when these physical agents are employed, whether the effects are due to the agents themselves or to the patient's belief in them. Dr. Moll states that "he knows of no well-authenticated case in which sense stimulation has produced hypnosis by a purely physiological action. Most people upon whom such experiments are made know that an attempt is being made to hypnotise them; they have been already hypnotised, and the stimuli arouse conscious or unconscious mental images of the hypnosis; or they have seen the same experiments with others, or they have heard of them." This remark touches the crucial point of hypnotism, and indicates the adhesion of Dr. Moll to the doctrine of the Nancy school,—

viz., that "suggestion" is at the bottom of all hypnotic phenomena.

Dr. Moll in his third chapter gives the Symptomatology of Hypnotism with great minuteness, but we cannot follow him into all the interesting physiological and psychological questions which he raises. Among the most striking features of hypnosis are the subjection of the voluntary muscles to external suggestion, the loss of the power of voluntary motion, rigidity of the whole body on the one hand, or on the other that peculiar condition to which the term "flexibilitas cerea" has been applied, various contractures; the phenomena of imitative speech (echolatic), the patient repeating what is said to him like a phonograph; sense delusions of various kinds, hypnotics being made to drink ink for wine, to eat onions for pears, to smell ammonia for eau de Cologne, &c. The senses of touch and taste are said to be those most easily influenced. The mucous membranes can be made anæsthetic by suggestion in hypnosis to such an extent that the fumes of ammonia in the nose and tickling of the throat are not felt; even the conjunctiva can be touched without producing the corresponding reflex. The muscular sense can also be inhibited in hypnotism, the patient resembling a sufferer from locomotor ataxia. Complete analgesia is exceedingly rare in hypnotism according to Dr. Moll, although it has often been regarded as common.

The influence of hypnotic suggestion upon the various physiological functions is a very curious subject, and some of the alleged facts are novel and startling. Krafft-Ebing claim to be able to produce any temperature he pleases in his patients by suggestion. Heidenhain and Preyer claim to have succeeded in controlling the secretion of urine. The perspiration and the saliva are also said to be under the influence of suggestion. Local reddening of the skin, slowing of the action of the heart, &c., have been said to be similarly affected. Startling as are such assertions, it can hardly be said that they present any *a priori* impossibility. It is quite impossible to assign any limit to the influence of mind upon body, which is probably much more potent and far-reaching than we are usually prepared to admit. Even more startling statements follow. We are informed that under the influence of hypnotic suggestion blisters can be made to rise upon a patient if he can be made to believe that a blister has been applied to him. Marks like burns are said to have been produced by pressing such objects as a snuff-box or a pair of scissors to the skin, the patient being told that the skin was being burned. Various bleedings are said to be capable of being produced by suggestion. Wheals, redness, and swellings are said to have followed the slightest pricks to the skin when the patient had been led to expect them.

Notes on the Examination of the Sputum, Vomit, Fæces, and Urine. By SIDNEY COUPLAND, M.D., F.R.C.P. London: H. K. Lewis.

IT has been aptly remarked that time is short and practical medicine is long, only a very small portion of the art being acquired even in a lifetime. It is all the more essential therefore that "Notes" purporting to give information on that subject should be at once for the most part comprehensive, concise, accurate, and arranged in such a form as will aid the student to retain them in his memory. These characteristics will be found in the "Notes" contained in the present little volume, for which the author modestly "lays no claim to any originality either in the subject matter or in the form in which it is presented." We think, however, that the work shows great originality, and more particularly in avoiding the practice so usual in students' note-books of condensing the print and not the matter. The work deals with everything connected with the sputum, vomit, fæces, and urine which a student or practitioner ought to know, and will form an excellent book of directions for those who are about to be examined on the subject of practical medicine.

ROYAL COMMISSION ON TUBERCULOSIS.

To the Editors of THE LANCET.

7, Whitehall-place, London, S.W., March 16th, 1891.

SIRS,—Will you be good enough to find a place in your columns for the enclosed copies of letters and question papers which have been forwarded at the request of this Commission by the Local Government Board to the medical officers of health?

I am, Sirs, your obedient servant,
LEOPOLD HUDSON, Secretary.

7, Whitehall-place, London, S.W., February, 1891.

SIR,—I am requested by the Commission to state that they will feel very much indebted if the President of the Local Government Board will cause the enclosed question papers to be forwarded to the medical officers of health of the United Kingdom, together with a note commending them to their consideration.

The Commission was appointed on the 21st July, 1890, "to inquire and report what is the effect, if any, of food derived from tuberculous animals on human health; and, if prejudicial, what are the circumstances and conditions with regard to the tuberculosis in the animal which produce that effect upon man."

The Commission have pursued this investigation up to a certain point and are engaging in certain experiments. They also desire to ascertain by inquiry through the medical officers of health of the United Kingdom whether any experience has been obtained by local medical observers that may throw light on the subject referred to the Commission.

Any experiences of the medical officers will be particularly valued, if they will be good enough to reply to the questions on the enclosed form. The Commission will also be obliged if they will kindly forward a copy of these questions to any practitioner in their neighbourhood who they think may be able to furnish information of the kind needed.

I am, Sir, your obedient servant,
LEOPOLD HUDSON, Secretary.

To the Secretary, the Local Government Board.

Local Government Board, Whitehall, S.W., March 16th, 1891.

SIR,—I am directed by the Local Government Board to forward to you the accompanying copy of a letter from the Royal Commissioners on Tuberculosis, expressing their desire to enlist the coöperation of medical officers of health in collecting information on the particular points specified in the memorandum of which copies are also enclosed; and I am to state that the Board will be obliged by your affording any assistance in your power to the Royal Commissioners in the important inquiry which they have undertaken.

Information on the subject, furnished by yourself or by any medical practitioner in whose hands you may think it useful to place a copy of the memorandum, should be communicated to the Secretary of the Commission, 7, Whitehall-place, London, S.W.

I am, Sir, your obedient servant,
HUGH OWEN, Secretary.

To Medical Officer of Health.

7, Whitehall-place, London, S.W.

Medical practitioners are invited to record for the information of the Commission any observations that they may have made on the apparent communication of tubercle from animal to man or from man to animal.

Information is asked for under the following heads:—

1.—A history, with particulars, of any case of tuberculosis in man which has appeared to the observer to be caused by the use of tuberculous food (meat or milk) or by attendance on tuberculous animals.

2.—A history, with particulars, of any case of tuberculous infection of animals which has appeared to the observer to have been contracted from human subjects suffering from tuberculosis.

3.—A history, with particulars, of habitual use of animal food believed by the observer to be tuberculous in cases where individuals or communities have kept free from tuberculous disease.

Replies to this inquiry will be received by Mr. Leopold Hudson, secretary of the Commission, at the above address.

February, 1891.

THE LANCET.

LONDON: SATURDAY, MARCH 28, 1891.

THE Registers of the profession have made their appearance a little earlier than usual. Last year they were not issued till April 17th. This year we received them on March 18th. In 1887 they were as late as April 29th. We must be thankful for the improvement in respect of time. But there is room for more. It is probably less the fault of the registrars than of the publishers; but it is clearly somebody's fault that public documents of great importance do not appear till nearly a quarter of the year is over. There are great lessons to the profession to be derived from a study of these Registers, which we may briefly indicate. First, they constitute the great and official roll of the profession. There are other compilations of great interest and with a value of their own, but for official and legal purposes, unless a practitioner finds his name here he is a private and non-medical person. Our first inquiry is as to the numbers of the profession. In the Medical Register itself there is no falling off. Perhaps when we come to the Register of Medical Students we may see indications of a recognition of the fact that the profession is overstocked and that young men are perceiving the fact. But in the Medical Register of the 31st December, 1890, there were no less than 29,163 names. This exceeds the number registered on the same day in the previous year by no less than 815!—a startling addition to an already excessive quantity. When we come to inquire into the details of the explanation it may seem a little less startling. But still the fact remains that 29,163 are on the Register for this year, against 28,348 in the previous year. They are not all pure additions—that is, names added for the first time to the Register. Of such fresh names there is a little falling off in the last year. In the three divisions of the kingdom—England, Scotland, and Ireland,—there were respectively 637, 462, and 167 *added* by registration, or 1266 in all, as against 657, 444, and 204, or a total of 1305 in the previous year—a difference of diminution of thirty-nine new registrations. There is a clause (14) in the Medical Act which empowers the Registrar, after certain fruitless inquiries, to remove names; and in some years hundreds of names are removed, in others hundreds are *restored* under this clause. In 1889 no less than 407 were so removed; last year the number was only 82. Practitioners so removed often apply for restoration, and in last year 105 names were restored, against 82 in the previous year. Clause 14 gives oscillation to the numbers on the Register, which must be considered in estimating the real additions by registration for the first time. We have seen these were less than in the year before by 39, and less than the average of the last five years by 78. So the additions, as compared with the previous year, are not quite so alarming, when they come to be analysed, as at first sight they appear to be. But as a matter of fact, there is a greater number of names on the Register for 1891 than there had been in any previous year, and doubtless represent an excess of the actual wants of the empire.

There are three or four ways by which men disappear from this roll of the profession which demand a few sentences. Happily those erased for evil behaviour only average two a year. Hundreds, as we have said, may be removed by carelessness in intimating changes in address. Some men cease to practise. It will surprise men of more lucrative and leisurely callings to learn that seven practitioners a year on an average so withdraw from the Medical Register. There remain the removals by death. And here we find the Registrar's figures most satisfactory and most unsatisfactory. Satisfactory as showing so healthy a state of the members of the profession; unsatisfactory as showing that the Registrar and Dr. OGLE are at serious variance as to the mortality of medical men. The removals from the Register by death have been only 467, which for the numbers in the previous Register (28,348) give a mortality of something over 15 per 1000. Dr. OGLE, a few years ago, gave the mortality of medical men as 25 in the 1000. We can scarcely doubt that the actual mortality of the profession exceeds 467, in spite of the Registrar's great pains to be accurate; but we are disposed to believe that it is not nearly so high as Dr. OGLE's statistics seemed to prove.

A novelty in the Medical Register is the Colonial Register. But our readers need not be unduly alarmed. It contains only two names—viz., those of two graduates of the University of Melbourne, one resident in Melbourne and one in London. Coming to the Register of Medical Students, it contains much material of interest, but we have only space to notice the supply of medical students, and the principal sources whence it comes. We find a falling off in each division. In England there were 974 registrations, in Scotland 643, in Ireland 229, in all 1846; as against 1039, 702, and 286, in all 2027, in the previous year. The number is less than in any of the previous twelve years, except 1883, when it was 1783. We must not too hastily conclude that the rush into the profession of late years has been really stayed. The commencement of medical study may either be at a medical school, or a hospital or infirmary, or by pupilage with a medical practitioner. It is interesting to note with regard to this latter method that it is followed by 140 of our new students. Cambridge, in England, has the largest number of registered students, 104. Edinburgh, in Scotland, has 244, the largest number of any school. In Ireland the largest number is in Queen's College, Cork.

The Dentists' Register contains 4802 names of dentists who hold diplomas from bodies in the United Kingdom, and fifteen from foreign sources, of which six are from Harvard University and nine from Michigan.

THE next meeting of Convocation, on May 12th—when the Draft Charter, prepared on the basis of the latest revised scheme, will be laid before the members for their acceptance or rejection—will be one of the most important in the history of the University of London. The Draft Charter, as well

as the scheme, will be circulated amongst them before the meeting, so that every member may become acquainted with the latest proposals. It will simply embody the details of the scheme which we published on Feb. 14th, and on it a vote of yea or nay will be taken. It must be understood that it will be impossible to alter the proposed Charter by rejecting any of its clauses or by the introduction of any others; it must be accepted or rejected *en bloc*. The question, then, which Convocation must decide, in the first instance—for, if accepted, it will still be contested by University and King's Colleges before the Privy Council,—is whether the graduates are willing to completely transform the character of the University in a manner at once at absolute variance with the traditions of the existing University and with the proposals for its reform which were suggested in the report of the Royal Commission. In that report the necessity of a local metropolitan University was specially insisted on, whilst the latest scheme is really an attempt to federate all the University Colleges of arts and science throughout England and Wales under the control of Burlington Gardens. Even in so doing it offers these Colleges a very insufficient representation on the Senate, and an unworkable set of regulations for their faculties and boards of studies. Eight representatives on a Senate of fifty-two meeting in London will be quite unable to give effect to any special action affecting the provincial interests, and, if not sufficient to do this, the representation of provincial Colleges, except through Convocation, is useless, and only seems to give a power which is really not possessed. The proportionate representation of Convocation is greatly reduced in the new scheme. But of much more importance to the medical profession and to our readers are the clauses dealing with future medical degrees in London. For the past seven or eight years we have urged the necessity for the removal of the disadvantages under which the London medical student labours in regard to the obtainment of a medical degree as compared with the opportunities enjoyed by students at other centres of medical education, and we had hoped that the report of the Royal Commissioners, pointing out that the present pass degree of the University of London was really an "honours" degree, would form the basis of some satisfactory plan for his relief. But the present scheme simply lowers the existing standard for the Pass M.B. degree by accepting the professional examinations of the Royal Colleges in lieu of the Intermediate and Pass M.B. Examinations, which are not really the barriers to the degree. It still maintains the Matriculation and Preliminary Scientific M.B. Examinations on the old footing. So far back as 1884 it was pointed out to the Senate of the University that the two preliminary examinations were those which required modification, but since then these have been allowed to become even more difficult, and it is further intimated that this standard will undergo no change. Where, then, is the relief? And if no relief, why should the existing status of the degree be disturbed? The new scheme only divides the responsibility for pass degrees by admitting the Royal Colleges to an equal share, so far as professional subjects are concerned, and quite fails to amend the unfair position in which London medical students are placed. It gives the Royal Colleges a position to which the Royal Commission would not assent, and it practically preserves the present conditions at the expense of the students. It is stated in an explanatory memorandum published by the Senate that the opinion was unanimously expressed by the representatives of the Royal Colleges and of the medical schools, "that nothing should be done which should lower the standard or lessen the value of the medical degrees of the University, or impair their scientific character;" but this scheme lowers the standard of the degrees without increasing the facilities for obtaining them. We also hear that the medical schools, except those of University and King's Colleges, have given in their adhesion to the scheme, although "no alteration is now made in the degree of M.D.," which therefore remains an "honours" degree. We cannot believe that the various committees of the medical schools, of whose members many were especially concerned in the promotion of the movement for obtaining degrees for London medical students on equitable terms, have really passed resolutions in support of such an unreasonable scheme, which, if the application for the Charter be successful, will prolong for another generation the present disparity between the terms on which London and the Scotch and provincial students respectively can obtain degrees. The advantages of studying at the largest clinical schools in the world will not compensate for many of the disadvantages under which the students will labour in after-life; no fair chance of obtaining a degree is afforded to them.

IT will probably take some time to settle in a satisfactory manner the various points of difference enumerated by Sir ANDREW CLARK in his recent letters to the War Minister on the present condition of the Army Medical Staff and the reforms by which it would be benefited. The medical officers are never likely to have their case put forward more fully and forcibly than Sir ANDREW CLARK has done; and we probably cannot do better than point out, as briefly as we can, how the matter stands at present between him and the War Minister.

The grievances of which the medical officers complain, notwithstanding their connexion with questions of social and professional position, are by no means of a purely sentimental character. A principal cause of complaint, the duration of continuous foreign service, is eminently practical in its bearings. It will be remembered that the period of five years was in 1888 extended to six. What is asked for is a return to the five years' system—a reform already advised by Lord CAMPERDOWN'S Committee. The medical officers, says Sir ANDREW CLARK, ask for the shorter term of *continuous* foreign service. Mr. STANHOPE promises he will consider what he can do to meet their wishes in this respect, but is doubtful whether such a concession will be considered a boon, as the shortened periods of foreign service would mean more frequent changes, and, as a consequence, some additional expense to the officers concerned. As regards conditions of sick leave for medical officers, Mr. STANHOPE also makes the necessary concessions. But from this point there is considerable divergence in the views expressed on either side. Take, for instance, the

question of the allotment of honours. On the one hand, we find H.R.H. the Commander-in-Chief, supported by a group of distinguished officers, declaiming against the excess of honours lavished upon medical men. On the other, we have the official statements in which the rewards reaped by medical officers for service in the field appear but as a fraction of those enjoyed by other members of the same force. Thus in the Egyptian campaign of 1882, while the percentage of decorations to the regimental strength in the Ordnance and Commissariat Departments combined was 84, that in the Medical Staff was 7. In connexion with the Nile Expedition two years later the value of services rendered was acknowledged by promotions in the proportion of 44 in the case of chaplains, 41 in that of pay officers, 30 of Ordnance, and 13·8 of Commissariat officers, while the medical department added but a lean total of 7·9. The higher decorations —namely, those of the Bath, the Star of India, the Order of St. Michael and St. George—have strayed at times to the breast of the military surgeon; but their presence has been of conspicuous rarity. Sir ANDREW CLARK gives an effective table, comparing the honours bestowed upon the Royal Engineers with those conferred upon the Medical Staff. Sir RALPH THOMPSON'S Committee in 1878 noticed the marked inequality between the medical and the combatant officers in this particular, and advised that the former should be treated as virtually combatant. It is needless to add that the recommendation was forgotten. In view of such facts and opinions as these we fail to understand what is meant by the term "excess" as applied to the rewards of the Army Medical Department. Mr. STANHOPE alleges that honours cannot be made a matter of proportion, and urges that the fact of the Engineer honours being "for the moment in excess of those enjoyed by the Medical Staff," in no way lessens the force of his statement; and he adds that if the rewards conferred upon Engineers in civil and colonial employ and in high command be eliminated, the two lists, of Engineers and Medical Staff, are not disproportionate. But, even so, Mr. STANHOPE does not touch upon the other illustrations cited by Sir ANDREW CLARK.

We come now to deal with the question of substantive rank. This subject has been treated with much vigour by Sir ANDREW CLARK, who maintains the position already "supported by the experience of the armies of Italy, Switzerland, Holland, Turkey, the United States, and of several other countries, by the opinion of all the medical corporations of the United Kingdom, by the conclusions of almost all bodies of men who have judicially investigated the question, and even by the approval of a rapidly growing number of combatant officers"—namely, that the army medical officer, having to discharge every military duty except actual fighting, must be confirmed in his position by some fitting rank and title. Mr. STANHOPE, on the other hand, declares that the claims put forward and the parallel instituted between the Corps of Royal Engineers and the Medical Staff are based upon misapprehension; that a Royal Medical Staff Corps with definite rank and title to all its officers, and its organic incorporation into the general army on the lines followed in the case of the Royal Engineers, can only carry one meaning to his mind (that of military command whenever a medical officer happened to be senior in the field); and that medical officers already possess the requisite limited command by virtue of the substantive rank conferred on them by their commissions. If this be so, it is to be regretted that it was not made plain. Instead of the words "with" or "as," the medical officer's position might have been described and defined at the time of relative rank being abolished by the use of the words "with the rank of" so and so—captain, major, colonel, as the case might be.

Officers of the medical branch of the service have indubitably the same claims to consideration as have those of any other branch of Her Majesty's service, and it is an anachronism in the present day, to say the least of it, to make any of those distinctions which Sir ANDREW CLARK emphatically says are made between the treatment accorded to them and other officers. Sir ANDREW CLARK cites in illustration, the cases of Surgeon-General Sir ANTHONY HOME and Surgeon REYNOLDS, both of whom won Victoria Crosses for conspicuous bravery.

We have never had any doubt that the Army Medical Staff could be welded together into a corps, and that, if necessary, its officers could be endowed with army or substantive rank equivalent to and conterminous with their sphere of duties. What we have contended for, however, is that so long as these officers are members of the medical profession and in the pursuit of their calling—and we hope proud of their professional status —they should retain some distinctive title expressive of the profession to which they belong. We would protest against the assumption that the profession of medicine is in need of any reflected dignity. It has every bit as much title to respect as the profession of arms.

WE referred last week to the experiences gained up to the close of last year in the use of KOCH'S tuberculin by the leading physicians of Northern Germany, as embodied in the lately issued official reports. In completing that account of the medical use of the remedy, a brief reference may be made to what is especially said concerning its employment in tuberculosis of the larynx and other internal organs. Respecting laryngeal tubercle, Professor SENATOR reports good results, and notes in one case the marked relief given to painful deglutition during the use of the remedy, but the difficulty returned when, owing to cardiac weakness and extension of lung disease, the injections had to be discontinued. Professor SCHULTZE (Bonn) observed in some cases that the first injections produced a hoarseness of voice not previously noticeable, whilst ulcers became covered with exudation and their bases cleansed. He could report no cure—a statement repeated by many others, as BIERMER (Breslau), MOSLER (Greifswald), WEBER (Halle), and LICHTHEIM (Königsberg). Still most, if not all, admit marked signs of improvement in the character of the ulceration, and Professor FRAENKEL (Berlin) is of opinion that the action of tuberculin on the larynx is more rapid than it is upon the lungs. Dr. P. GUTTMANN, who treated upwards of thirty cases of all kinds, varying "from simple infiltration to extensive ulceration and perichondritis," observed favourable effects in all, especially in the slighter cases. But he noted actual

cicatrisation of ulcers. It is noteworthy that he expresses an opinion that the fears of exciting a dangerous œdema glottidis by the action of tuberculin are groundless. Professor FRAENKEL thinks the laryngeal ulcers improve more rapidly than they do under local applications; and Professor BARTH (Marburg) observes that pain and cough abate after a few injections. As regards other organs there is little to be said. The remedy has been applied in comparatively few cases, and of the majority of these it is reported that they are still under treatment. Dr. OLSHAUSEN thought the ascitic effusion of abdominal tuberculosis became rapidly absorbed under the remedy. Yet the list of "cures" embraces only one case of pleurisy and one of abdominal tuberculosis. Four cases of renal tuberculosis are all returned as "unimproved."

Passing from the medical to the surgical clinics, it is at once patent that there is not quite so much diversity of opinion respecting the value of the remedy among the latter as in the former. Thus, as to its use as an aid to diagnosis, we find Professor VON BERGMANN considering that it is of much value in discriminating a tuberculous from a syphilitic or cancerous affection; Professor VON BRAMAN (Halle) alleging that it is apparently a certain test of the presence of tubercle; and Professor VON ESMARCH (Kiel) expressing an opinion that it is of great service in the diagnosis of lupus and bone and joint disease—especially because of the fact that cases of early disease react the best. In a similar sense speaks Professor BRAUN (Königsberg), who thinks the remedy has extended the powers of diagnosis, as establishing the tubercular nature of affections not hitherto recognised as such, and as determining whether a tuberculous process is cured or not. Professor KÜSTER (Marburg) holds it to be a marked aid in diagnosis, although he failed to get reaction in certain cases of fistula, and yet observed reaction in a case of lupus erythematodes. Professors R. KÖHLER and WESTPHAL think it surpasses all other measures, and that its specific powers are indubitable. Professor LEWIN (Berlin) and Professor DOUTRELEPONT (Bonn) also express their high appreciation of its value. Exceptions to the production of reaction in undoubted cases of tubercular disease are, however, noted by several—e.g., Professors BARDELEBEN and A. KÖHLER,—who think that such occasional failures may be explained by variations in individual susceptibility or in the preparation of the remedy. Professor TRENDELENBURG (Bonn), whilst admitting its practical value in the detection of tubercular foci, notes that it is especially uncertain in tubercular disease of the testis. Still, he has used it with advantage in the differential diagnosis of vertebral caries and effusion into the knee-joint, as well as in the early detection of renal tubercle. Professor MIKULICZ (Breslau) notes the various degrees of reaction that may be observed, sometimes a general reaction being present without any local effect; in such cases the diagnosis of tubercle rests mainly on the intensity of the febrile reaction. He has no doubt tubercle may be excluded if neither general nor local reaction develops. Professors KÖNIG and HILDEBRAND (Göttingen) consider that, in view of some undoubted cases of tuberculosis not showing any reaction, one ought not to estimate its diagnostic powers too highly. Professor HELFERICH (Greifswald) seems to be in doubt whether it is an absolute test. Professor NEISSER (Breslau), who believes in its diagnostic value—negatively as well as positively—thinks that general reaction without local effect may imply the presence of concealed internal tubercle.

The surgical cases in which tuberculin has been used for its therapeutic effect comprise mainly lupus, bone and joint disease, disease of lymphatic glands, and a few cases of tubercular ulceration of soft parts or of cicatrices. There is practical unanimity regarding the striking effects produced in lupus, more than one observer recording what he considers a complete cure (there are five such out of a total of forty cases discharged from hospitals, but 148 remained under treatment), although, as Professor DOUTRELEPONT remarks, sufficient time has not elapsed to exclude the possibility of a recurrence. Opinion is less unanimous regarding the value of the injections in tuberculous bone and joint disease. Professor V. BERGMANN stands alone, however, in the assertion that they seem to be wholly without effect (*wirkungslos*) in such conditions. Professor TRENDELENBURG found no clear result from the use of the remedy, and noted that cases of suppurating joints were made worse. But both he and most of the other surgeons seem to have had cases of more or less marked improvement, especially when it was employed as an adjuvant to more radical surgical measures. The truth is that comparatively few opportunities seem to have occurred for testing its efficiency in the earliest stages, and just as in phthisis, so in joint and bone affection, the disease was already complicated when it had been subjected to the treatment. Professor v. BRAMAN thinks that the supervention of suppuration is a clear indication for surgical intervention.

The general impression resulting from the perusal of these surgical experiences is that sufficient has been shown to justify the further careful trial of the remedy; but that in justice to its powers the cases should be selected with discrimination. The volume contains also reports from various pathological institutes giving the post-mortem appearances in fatal cases. This aspect of the question has, since these reports were drawn up, been so fully gone into by Professor VIRCHOW that we do not propose to enter upon it now. It will, however, have to be maturely weighed and considered in connexion with the question of the indications and contraindications for the use of so powerful a remedy as tuberculin. These are questions which may well be left over for a space, and the debate which will shortly take place at the German Congress of Internal Medicine will doubtless throw more light upon them than can be gained from the brief experiences recorded in these official reports.

THE following notice has been issued from the Foreign Office:—"With reference to the notice which was communicated by the Foreign Office to the newspapers on Jan. 16th respecting an outbreak of typhoid fever at Florence, Her Majesty's Consul-General in that city reports that the epidemic is now declared to be at an end. A few isolated cases may still occur, but nothing more than is usual in a population of 200,000 inhabitants. The condition of the water-supply is occupying the urgent attention of the local authorities, and there is every reason to believe that a satisfactory solution will shortly be arrived at."

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF PHYSICIANS.

THE Extraordinary Comitia held on the 23rd inst., to "elect a President, pursuant to Act of Parliament 23 & 24 Vic., cap. lxvi.," was very well attended. The preparation of a new edition of the By-laws and Regulations of the College was entrusted to a committee consisting of Dr. Church, Sir Dyce Duckworth, Sir H. Pitman, Dr. E. Liveing, Dr. Marsh, and Dr. Allchin. The report of the Committee on the Midwives' Registration Bill was presented, and on the motion of Sir R. Quain, seconded by Dr. Barnes, it was received and entered on the minutes. The report, which was favourable to State registration, suggested that the General Medical Council might be entrusted with the task of framing regulations. On the motion of Dr. Champneys, seconded by Dr. Barnes, it was resolved to have the report printed and circulated among the Fellows, with a view to its further consideration. A communication was read from the Association of Certifying Factory Surgeons, asking the College to take immediate action to prevent the passage of Clause 19 of the Factory Acts Amendment Bill now before Parliament, which clause abolishes the granting of medical certificates for children and young persons engaged in workshops. It was decided to leave the matter in the hands of the President to take such action as he might think fit. On the motion of Sir Joseph Fayrer it was resolved to give a reception to the members of the International Congress of Hygiene, which will meet in London in August next. Sir Andrew Clark then delivered the annual Presidential address. He said that during the past year 11 Fellows and 9 Members had died, and that on January 1st of the current year the College comprised 299 Fellows, 466 Members 8 Licentiates (prior to Dec. 1860), 30 extra-Licentiates, 4832 Licentiates, and 80 Diplomates in Public Health. He referred to the baronetcies conferred on Sir H. Acland and Sir R. Quain, and the Court appointments of Sir A. Garrod and Sir Dyce Duckworth. He stated that the total outlay incurred by the College for the new buildings and laboratories on the Embankment amounted to £31,644, that the laboratories were now fully equipped and in working order, and that it was estimated the annual working expenses of the institute would be about £1000. He paid a warm tribute to the admirable work of Dr. E. Liveing, who "has proved himself a worthy successor of our revered Emeritus Registrar, Sir H. Pitman"; and next proceeded to sketch in felicitous language and with much discrimination and feeling the careers of the following deceased Fellows: Dr. A. Lochee of Canterbury, Dr. A. J. Pollock, Dr. Fincham, Dr. Matthews Duncan, Dr. C. Handfield Jones, Dr. Graham Balfour, Dr. G. Gulliver, and Dr. Markham. A review of the affairs of the College during the past year, including especial reference to the reconstitution of the University of London, concluded an address characterised throughout by much eloquence and clear thinking. It was received with much applause, and the motion of the Senior Censor (Dr. Russell Reynolds), according the thanks of the College to Sir Andrew Clark, coupled with the request that he would allow his address to be printed, was carried by acclamation. The election for President then took place. Sir Andrew Clark received 96 votes out of the 103 Fellows present, the remainder being divided between Sir R. Quain, Dr. Wilks, Dr. Bristowe, Dr. G. Johnson, and Sir A. Garrod.

ACCIDENTS UNDER ANÆSTHETICS.

THERE are various contingencies against which no amount of forethought or care can guard, and perhaps this is more emphatically true of the use of anæsthetics than of almost any other domain of the healing art. Although the most careful thought has been given in the choice of the agent to be used, and all the preparations of the patient and the operating-room have been properly made, yet what, for want of a better name, we call an accident takes place, and all calculations are thrown out. We do not here include accidents which can be referred to any given anæsthetic, since no authoritative decision can be yet quoted as settling the vexed question, Which is the best and safest anæsthetic? Opinions differ, and so each medical man has to decide for himself. But when epileptic seizures, vomiting of hard masses of food, &c., occur, it matters little what agent has been employed—the results are the same. These remarks are illustrated by some cases the reports of which have been recently placed before us. At Chelmsford a blacksmith, who was an epileptic, fell while in a fit, and burnt his arm so severely as to necessitate amputation. Chloroform was administered and the operation commenced, but an epileptic seizure took place and the man died, the "cause of death being epilepsy and syncope." The occurrence of epileptic fits under anæsthetics—nitrous oxide, chloroform, ether—is not uncommon, but as a rule is not followed by a fatal result. The knowledge of the existence of epilepsy in a patient, while it emphasises the necessity for caution, does not contraindicate the employment of an anæsthetic. In the case of the death which occurred at University College Hospital, the patient, a young man, had been seen in the early part of the day and carefully instructed to abstain from food, as he was to present himself for a trifling operation in the evening of the same day. He was asked, before the house physician administered ether, whether he had obeyed his directions and replied in the affirmative. It appears, however, this was not true, as he had just before going to the hospital partaken of a hearty meal. The operation over, vomiting came on, and as the patient became cyanosed the finger was passed to the back of the pharynx and dislodged a mass of meat. The symptoms were not relieved, and suffocation appearing imminent, laryngotomy was performed, but without success. The necropsy showed that another wedge of meat had been drawn into the trachea and become fixed, occluding both bronchi. Here only to the victim could blame be imputed.

A METHOD FOR RETAINING ARTIFICIAL DENTURES.

ONE of the great discomforts of artificial dentures where all the teeth have been lost and much absorption of the gums has taken place is the constant tendency for them to slip forwards. To overcome this difficulty Mr. Wm. Dall of Glasgow has developed a method of fixing dentures by means of two or more gold pins attached to the under-surface, which enter holes either made by drilling the jaw-bone or left after the extraction of a tooth. In the former case the gum is first painted with a 50 per cent. solution of cocaine, and the holes are drilled by means of the dental engine. In the lower jaw any place may be chosen between the symphysis and the mental foramen, and in the upper almost anywhere, care, however, being taken not to pierce the floor of the antrum. Koch's solution is used as an antiseptic at the time of operation, and also prescribed as a mouth-wash during healing. The denture is applied a few days later, and is of course to be regularly removed for the purpose of cleaning. He believes that the bone forming the walls of the socket becomes sclerosed, and that there is little danger of necrosis. Where the holes or sockets result from the extraction of teeth the gold pins have simply to be fixed to the denture, and in all cases it is important that they should be parallel. During the last three years Mr. Dall has drilled ten cases

in all, seven in the upper and three in the lower jaw, and in only one inflammation followed by suppuration occurred, and this quickly subsided. In fifteen cases dentures were inserted with pins entering the sockets of extracted teeth. Two cases were shown at the Odonto-Chirurgical Society of Scotland exemplifying this method of treatment. This operation can hardly be considered analogous to wiring bones together, as was suggested during the discussion of Mr. Dall's paper, for this is done under antiseptic conditions impossible in the mouth, and, moreover, every effort is made to keep the wound aseptic afterwards, whereas in drilling the sockets are left open. Some objections to the operations are the risk of opening up the antrum or the inferior dental canal, and the difficulty of keeping the sockets clean.

THE SANITARY STATE OF SOUTHEND.

THE Local Board of Health of Southend seem in no hurry to take the steps necessary to the removal of the reproach which now attaches to their town. Since the serious epidemic of enteric fever of last autumn we have had reports from one and another, and also the exhaustive account of the circumstances associated with the fever which Dr. Thresh issued after his special commission to inquire into the causes of the outbreak. Then came the failure to re-elect the past medical officer of health, and now, at the moment of the Easter holidays and within about four months of the next summer season, we find Mr. E. Phillips, the new medical officer of health, making the old suggestion over again—namely, that it is of the greatest importance that the sewage of the lower town should be dealt with. Twice a day the tide enters the sewer, and the resulting reflux of sewage must be prevented if healthiness is to be maintained. The view held by the health officer may be judged of from his evidence in a recent trial which was the outcome of an attack of enteric fever, due to unwholesome conditions in a sublet house, and in which he laid stress on the "especial" need in even distant parts of Southend of preventing the sewer air forced in by the tide from getting into houses. But with all this before the Local Board, the latest recommendation is still the first one that was made—namely, "the sooner a skilled engineer was employed ..... the better it would be for the place."

DIABETIC RETINITIS.

IN the *Deutsche Medicinische Wochenschrift*, Nos. 51 and 52, 1890, Dr. J. Hirschberg publishes the results of his investigations on the affections of the retina which occur in connexion with diabetes mellitus. There are three chief forms: (1) A peculiarly characteristic inflammation attacking the central region of the retina, accompanied by small bright spots, and generally also by minute hæmorrhages; (2) hæmorrhages into the retina, followed by inflammatory and degenerative changes; (3) a rarer form of inflammation with degenerative changes. The connexion of this condition with diabetes has yet further to be investigated. Inflammation of the retina occurs in patients of middle age, or in those more advanced in life who have had sugar in the urine for some considerable period. It generally affects both eyes, and the earliest symptoms are bright specks appearing before the eyes, difficulty in reading, and general indistinctness in viewing small objects. The acuity of vision is therefore diminished, but the field of vision is normal, although dark spots often occur in the centre of it. When the fundus is examined by the ophthalmoscope groups of small white shining spots are seen between the superior and inferior branches of the central artery, and others are seen close to the optic disc, being most numerous on its inner side. These spots gradually grow larger and form narrow streaks or curves, but star-shaped collections are never seen. No pigmentation occurs. Minute hæmorrhagic points and streaks are observed surrounding the bright spots just referred to. The complete escape of the optic disc is remarkable, as is also the absence of any considerable cloudiness of the retina, or any very marked changes in the vessels. In this respect diabetic retinitis differs from the albuminuric form. The former is an exceedingly serious condition, as there is little probability that the disturbances of vision will disappear, and it also denotes that the primary disease (diabetes) is severe and deeply rooted. Spontaneous hæmorrhages in the retina occur, being due to changes in the vessels, as atheroma is a frequent consequence of diabetes. Small round patches of hæmorrhage are then seen, if attaining any size, being accompanied with cloudiness of the vitreous, hæmorrhagic glaucoma, and hæmorrhagic infarcts in the retina. These hæmorrhagic affections of the retina are less characteristic of those occurring exclusively with diabetes as those described above, but the prognosis is even more grave, not only as regards the length for which sight may be prolonged, but also in reference to the time the patient will probably live.

DEATH FROM SWALLOWING CHLOROFORM.

A SAD case is reported from Abingdon. According to a local paper, a youth aged twenty was tempted, while suffering from ill-health and under the dread of a forthcoming examination, to take chloroform, and, it would appear, actually swallowed some three ounces. Although emetics were given and vomiting induced, the unfortunate young man died. The drug seems to have been taken soon after 7 A.M., and death took place at 9.15 A.M., in spite of the assiduous efforts of his medical attendants. The effects of chloroform taken into the stomach are now well known; the symptoms are similar whether the vapour is inhaled or the liquid swallowed, save that in the latter case there is an irritant action superadded to the narcotic and anæsthetic effects occurring in the former.

INTERNATIONAL MEDICAL CONGRESS IN BERLIN.

WE have been asked to announce that it has been found more convenient that copies of the Transactions of the International Medical Congress should be distributed by an English firm instead of being obtained direct from Berlin. Arrangements have been made with Mr. Kolckmann, of 2, Langham-place, for their sale, and for free distribution to members on payment of a nominal sum for carriage. Country members can have them forwarded on application. Non-members can obtain them at the net price at which they are published in Berlin. Volume I. only is at present published; the rest will follow at short intervals.

EPSOM COLLEGE.

AS an indication of the good work being done in Epsom College the following facts may be mentioned. Last year the school passed six boys through the preliminary scientific examination for the degree of M B. of the University of London; sixteen passed through the London matriculation examination, and eight passed last January. In July, 1890, seven boys (all who entered) obtained higher certificates in the examination of the Oxford and Cambridge Board, and since Jan. 1st three open scholarships have been gained, two directly from the school—one at Cambridge of £30 for natural science, and one of £80 at Oxford for classics. It has become necessary for the Council to consider the question of extending the school accommodation. Those interested in this important charity should not forget the proposal made by Dr. Holman, the treasurer, at the last festival to enable the pensioners to have augmented incomes, with residence

amongst their friends. This should not be lost sight of, and fresh endeavours should be made at this time to meet the appeal of the treasurer to secure fresh donors and fresh subscribers to the institution as a whole, so as to enable the Council to undertake these pressing responsibilities and to extend the advantages offered by the school.

THE FAVERSHAM POISONING CASE.

AFTER a trial which lasted four days, Charles Lyddon, aged twenty-eight, was acquitted on the 21st inst. of the charge of murdering his stepbrother, William Reeks Lyddon. The case had been removed from the Kent Assizes to the Central Criminal Court by writ of *certiorari*. The deceased had practised as a surgeon at Faversham for twelve years. For two years he had been assisted by the accused, who was to receive £50 a year for his services. It appears that the salary was not paid. Partly to cover this debt and partly to secure some creditors of the deceased's estate, a covenant was executed in April, 1889. By this instrument the deceased became indebted to his brother in a sum of £550, secured by the goodwill of the practice and the household furniture, but it did not contain the usual restricting clause preventing the deceased from practising in the vicinity of Faversham. It was contended by the prosecution that the desire to possess himself of the amount guaranteed by the deed was the motive of the accused for taking the life of the deceased. The evidence revealed a most painful history of intemperance, for it established that not only the deceased but his mother and the accused were addicted to drink. The deceased seems to have been a confirmed drunkard, and from the testimony of several witnesses there could be little doubt that he also indulged in narcotics. From June to August, 1889, the deceased was an inmate of St. Thomas's Hospital, where he was treated for fistula. In October, 1890, at the suggestion of Dr. Boswell, he went to the Cottage Hospital at Faversham, where he remained for about three weeks. Subsequently he went to Herne Bay, and from there he returned home on Nov. 24th. The following day he was dead. From the evidence of a boy named Naylor, employed as a page by the Lyddons, it appeared that there were frequent quarrels between the deceased and his brother, when either or both of them were under the influence of liquor, but that at other times they lived on mutually affectionate terms. On the night preceding his death the deceased was made by the accused to sleep in a lumber room, a circumstance which had not previously occurred. In this room he was locked by the accused, who slept with the boy Naylor. At 7.30 the following morning the deceased was found in a state of coma, partly dressed, on the floor of the room. When discovered neither the accused nor his mother appears to have assisted Naylor in removing deceased to Mrs. Lyddon's bedroom, but this may be accounted for by their thinking him helplessly drunk, a condition not by any means unusual. Two local medical men were called in, and from their previous knowledge of the life led by the family, and also from the circumstances surrounding the death of Mr. Lyddon, very properly refused to give a death certificate. The accused sent for the police, and offered them every facility in searching the house. In the room occupied by the deceased overnight a bottle, tightly corked, containing some morphia, was found. From an analysis of the contents of the stomach and the liver, Dr. Stevenson was of opinion that death was due to morphia, and that from seven to eight grains of the drug had been administered. Although on the night previously to his death deceased was very drunk from whisky-drinking, none was detected in the stomach, but there was a quantity of fluid. From the latter fact the prosecution suggested that some liquid had been given to the deceased by another person. It was not proved, however, that he could not have obtained it himself. Moreover, it is by no means certain that during the process of osmosis the spirit may not have entered the circulation, leaving the watery constituent in the stomach; or the latter may possibly have transuded from the gastric vessels into the viscus. At any rate, the physiological problem was too complicated to afford grounds for rendering the guilt of the accused even probable. In due course an inquest was held at which the accused was examined and cross-examined on oath. During the lifetime of the deceased the accused had on various occasions and to different people complained of the former giving way to the abuse of drugs; and Dr. Hill of Colchester and Dr. Boswell of Faversham had both seen deceased in a condition consistent with the theory that he was under the influence of narcotics. Then, too, no attempt at secrecy was made by the accused either on the night before the death or subsequently. His conduct was not that of a person about to perpetrate the crime of administering a fatal dose of morphia to the deceased. The coroner's jury returned a verdict making the brother chargeable with causing the death. Considering that an inquest is a court of first instance equivalent to a grand jury, no fault can be found with the event of the inquiry; but it was manifest to most who studied the evidence that it would fail to bring to the minds of the jury at the Criminal Court the conviction that the accused was guilty "beyond reasonable doubt." To the verdict we unhesitatingly subscribe.

LEPROSY IN NEW SOUTH WALES.

THE Government of New South Wales have placed on the statute book an Act providing for the notification of cases of leprosy, for the detention and isolation of lepers, the appointment of lazarets, &c. The Act (54th Vict. No. 20) requires that the immediate notification of any case of leprosy be made in writing to the proper authorities by the householder and medical practitioner in attendance on the case, under a penalty of not less than £10 or more than £50. Power is given to the governor to direct the formation of a lazaret for the reception and treatment of lepers, to the board of health to investigate reported cases, and to order the removal and detention of the leper. Regulations may be made and issued by the governor, on the recommendation of the board of health, to carry the Act into effect, and penalties are imposed upon any person who wilfully disobeys or obstructs the enforcement of such regulations.

THE RELATION OF BACTERIOLOGY TO NOSE AND THROAT DISEASES.

AT a meeting of the British Laryngological and Rhinological Society held on Friday evening, the 20th inst., Dr. John Macintyre of Glasgow gave an interesting lecture, introductory to the discussion on the relation of bacteriology to the diseases of the throat and nose. In the course of his lecture Dr. Macintyre discussed the general facts concerning bacteriology, such as classification, vital phenomena, &c., and stated the arguments for and against the vitalistic theory of disease. He demonstrated a large number of specimens of well-known forms of micro-organisms under the microscope, as well as numerous micro-photographs on the screen, and made special reference to those of interest in throat and nose work. He showed several found in the mouth and nose of healthy people, which are apparently harmless, and others found in diseases where there is decomposing material such as in ozæna. He referred to the specific forms found in diseases of the lower part of the respiratory tract, as tubercle, lupus, diphtheria, pneumonia, and suppurative diseases. Lastly, he discussed the question how protection was to be got from the diseases associated with micro-organisms, noting the result of inoculation, and criticised the theory of phagocytosis. He explained some

interesting experiments now being made in Glasgow with reference to the hypodermic injection of chemically pure carbolic acid, which bid fair to demonstrate the possibility of rendering the effects of certain pathogenetic micro-organisms inoperative within the body. In considering the possibility of rendering the tissues unsuitable for the growth of organisms after their entrance into the system, he cautioned his audience not to be carried away too hastily by Koch's or Liebreich's methods of treatment for tuberculosis.

TREATMENT OF DIPHTHERIA.

DR. GUNTZ of Dresden has had great success in the treatment of diphtheria with bichromate of potash in water containing carbonic acid, which he has found by numerous experiments on animals, as well as in the course of extensive clinical observation, to be entirely harmless. For an adult 600 grammes (about a pint) are ordered per diem, in which are dissolved three centigrammes (about half a grain) of potassium bichromate. The whole quantity is directed to be taken in about half a dozen doses, regarding which it is important to observe that they must not be taken on an empty stomach; a little milk or gruel should therefore be swallowed before each dose. Children, of course, take smaller quantities, according to age. They can be given the medicine in a tumbler mixed with some fruit syrup, and they do not generally object to it. At the commencement of the disease Dr. Guntz washes the mouth out with a 1 per cent. solution of permanganate of potash containing 0·1 per cent. of thymol, or with a corrosive sublimate solution of the strength of 1 in 3000, taking care, in the latter case, that none is swallowed, and that the mouth is well rinsed with water afterwards. In the case of young children the pharynx must be brushed out with the solution. Sometimes iodoform is employed, being applied on the tip of the finger to the affected spots. Dr. Guntz specially remarks that potassium bichromate, though harmless in the way described, is by no means so when in pills, powders, or in solution in non-carbonated water.

STRUCK BY LIGHTNING.

A MOST curious and interesting case is recorded in the *Boston Medical and Surgical Journal* by Dr. L. M. Palmer. It is that of a man who, while mowing with a two-horse mowing machine, was apparently struck by lightning, while the off horse of the team he was driving was instantly killed. The men who were working near him said that he did not fall from his seat, but that his head simply tipped backward. When first seen by Dr. Palmer his pulse was 100; respiration 40 per minute and stertorous; the pupils were dilated; eyes fixed and staring; conjunctiva insensible to touch; and there was general muscular rigidity. He was treated by hypodermic injections of brandy and ammonia, and at the same time was briskly rubbed, and his condition soon changed to that of constant restlessness. He had some bromide of potassium, and in an hour and a half was able to be moved in an ambulance waggon. On arriving home he vomited, and during the next few days he had several similar attacks. He passed a restless night, but became quieter in the early morning, when he for the first time recognised his friends and surroundings. On careful examination on the day after the accident there was found a gash in the occipital region an inch and a half long down to the bone; the hair between the cut and the neck had been destroyed, and he had a burn in the left scapular region 7 in. by 9 in. There was a blister along the under part of the right arm and a deep burn below the elbow over the fleshy part of the forearm. No mark could be seen beyond this. The crown of his straw hat was completely destroyed. He made a slow recovery, being troubled with noises in the head, deafness, a feeling of confusion, loss of memory, and general prostration. The right hand and arm were almost powerless, and he suffered from pain in the lumbar region and genitals. In eleven days he was able to sit up; in ten weeks he could once more drive a team, but even so long as fourteen weeks after the accident he was weak, walked as if he had lumbago, his right hand and arm were weak, and he had tenderness over the nerves of the right arm and forearm, and in the lumbar and gluteal regions; he also had great loss of memory. Looking at the serious and unusual nature of the accident, it is not surprising that his recovery has been slow, but as improvement seems still to be taking place, Dr. Palmer hoped that it would be complete.

TRANSITORY BLINDNESS IN WHOOPING-COUGH.

IN the *New York Medical Journal* Dr. Jacoby has recently drawn attention to the occurrence of this condition in two cases which he has observed. In the first case there was inaction of the pupils to light, and they were widely dilated; there was also optic neuritis. In the second case the reaction to light was retained, the media were clear, and the fundi normal. As the blindness was gradually recovered from, a condition of right hemianopsia was present in one case. The author regards the condition as due to œdema of the brain, but it is well to remember that in children this disease is not uncommonly accompanied by convulsion, a condition probably analogous to the sudden temporary loss of consciousness which occurs in the adult, and it may be that all those conditions are associated with some toxic blood state, a result of the morbid process. Both cases recovered.

DEFORMITY OF THE HEAD IN MYOPATHY.

M. MARIE has recently described the case of a child who was suffering from progressive myopathy, and in whom there was considerable head deformity. The antero-posterior diameter was 166 mm., the transverse 168 mm., giving a cephalic index of 101. As the usual cephalic index is about 80, the limit in negroes being 88·5, it will be recognised that the departure from the normal was considerable. Another case was referred to with a cephalic index of 89·7. The explanation offered is that there is some osseous condition associated with the muscular one, and that the position which the patient has to assume accounts for the deformity in the bones.

THE HOUSING OF THE WORKING CLASSES.

THE delegates from some of the London vestries and district boards have held another meeting at the Paddington Vestry Hall, and have adopted a report as to the conditions which render a house so dangerous or injurious to health as to be unfit for human habitation. This report divides houses into two classes—those which can be repaired, and those which are incapable of repair; and, further, it states that the housing of the working class contemplates this distinction. We do not, we must confess, know upon what evidence this last statement rests. Undoubtedly, the Act provides for repair and demolition, but for both the house must be closed. The statement in the report, however, appears to indicate that this is not all. The attempt to specify particular structural defects is a mistake. The Act does not deal with houses technically unfit for habitation, but with houses actually in such a condition as to be dangerous in a degree which renders them unfit for such habitation, a point which can only be decided after the local circumstances of the premises have been taken into account. The only two resolutions of any practical importance which were adopted were one by which it is claimed that where an improvement scheme under Part II. of the Act is carried out, to which both County Council and district authority

have contributed, the land acquired shall be vested in the district authority; the other that the owner of a house should be informed, at the time of service of the first notice, if it is the opinion of the local authority that the house cannot be made fit for habitation.

THE POPULATION AND BIRTH-RATE OF FRANCE.

THE diminishing birth-rate of France is attracting attention from more points of view than one. In a remarkably interesting paper by Mons. Monod, Director of the Public Health Department in the Ministry of the Interior at Paris, entitled "Les Mesures Sanitaires en Angleterre depuis 1875 et leurs Résultats," the late Lord Beaconsfield is first quoted in a passage where he refers to the decadence of nations in connexion with causes such as the population remaining stationary in point of numbers, and it is then pointed out that if France were saving life to the extent to which England has done since our modern sanitary administration took general effect 130,000 lives would be annually spared to our neighbours. Another document has recently been issued from the same Government Department, and in the opening address by Mons. Brouardel to the Minister of the Interior, France is reminded that whilst the population of neighbouring nations is doubling itself every forty to fifty years, that of France is hardly increasing at all, and that unless the amount of death is diminished the death-rate of the country will in two or three years exceed the birth-rate. Whatever influences may be held to affect the birth-rate, Dr. Brouardel regards them as beyond the scope of the Government, but he urges that an imperative duty is imposed upon the State and on local communities to prevent such children as are born from succumbing to preventable epidemic diseases. The cautions thus issued are weighty ones.

THE TUBERCULOSIS INQUIRY.

As will be seen from some correspondence published in another column, the Royal Commission on Tuberculosis, having completed one stage of their inquiry, and having also initiated an experimental investigation into the communicability of that disease, have now addressed a series of questions on the subject to the medical officers of health and practitioners throughout the country. The object is, in the first place, to obtain some definite information regarding the transmissibility of tubercular disease to man through the consumption of the flesh or milk of tuberculous animals. It is well that such an attempt should be made to put the question to the test of actual experience; for hitherto, it must be freely confessed, the evidence in support of such transmission has been less direct. It has been based upon such inferences as can be derived from the similarity in anatomical lesions between human and bovine tuberculosis, or those furnished by the prevalence of mesenteric tubercular disease amongst the milk-fed portion of the community, and chiefly perhaps upon the fact that the bacillus is common to all forms of tuberculosis, both in the lower animals and in human beings, together with the results of inoculation experiments. That there are great difficulties in the way of proving such direct transmission of tubercle by means of the ingesta must be admitted, not the least being the proof that the food consumed really proceeded from an infected animal. Still, here and there, it would seem, if there be such direct transmissibility, cases must have occurred under circumstances which can hardly admit of any other explanation. If any such are known to any medical practitioner in the United Kingdom, he will confer a great benefit on the community by placing the Commission in possession of the facts. Secondly, information is sought upon the question of the transmission of tubercular disease from man to animals. Here, again, the determination of positive facts must be very difficult, owing to the comparative frequency of the disease both amongst cattle and mankind. It is, however, not unlikely that some examples of local (inoculated) tubercle may be thus shown to occur; and there have, we believe, been recorded instances of tuberculosis in fowls traced to infection of their food by phthisical sputa. The Commission do not propose to limit their inquiry to the positive side of the subject, for they ask, in the third place, to be informed of instances of the habitual use of animal food believed to be tuberculous "in cases where individuals or communities have kept free from tuberculous disease." Such negative evidence would, doubtless, be of value if it could possibly be obtained; but judging from the prevalence of tuberculosis amongst animals used for human consumption and the comparative laxity which, until the last few years, permitted the meat from such sources to go on the market, and the ubiquity of the human disease, the non-tuberculous must be limited to a very small area of the earth's surface. Moreover, the fact that several persons exposed to the same source of infection escaped whilst others contracted the disease might only show that a certain proclivity was needed to ensure direct transmission. The assertion that the Jewish community, when living strictly according to the Mosaic code, are remarkably immune from tuberculosis has been made to meet the converse case—namely, that rigid rules as to dietetics may greatly diminish the liability to infection through diseased flesh. But in this case one must not lose sight of other, and perhaps equally important, sanitary rules which were enforced as part of a religious observance. We congratulate the Royal Commission on its bold attempt to grapple with this important question at close quarters; but we are not very sanguine, from the complex conditions of modern social existence, that they will succeed in procuring such reliable evidence as may determine the question one way or another. We can hardly conceive of a matter more difficult of demonstration, and yet one in which there appears to be such fairly reasonable *primâ facie* ground for acceptance, than is that of the transmissibility of tuberculosis between man and the lower animals.

THE AUSTRALASIAN HEALTH OFFICER.

WE have received for comment an advanced proof of an article in the *Australasian Medical Gazette*, under the above heading, the main burden of the article being a criticism of the action of the quarantining staff and of the health officer for the colony of Victoria. It is always difficult, without knowing what has to be said by both sides, to express a definite opinion as to any line of action taken in regard of infectious disease; but when the circumstances involve the question of judging between a case of chicken-pox or of small-pox modified by previous vaccination, we should justly be deemed hasty if, in the absence of the most detailed facts, we ventured to decide a point which is admitted by experts to be one of the least easily solved in connexion with the infectious fevers. So far as we can gather from the few facts included in the editorial comment, a vessel had arrived at Melbourne having on board a man who, according to the ship's surgeon, had recently had chicken-pox. The Victorian health officer seems to have had doubts as to whether it might not have been small-pox modified by vaccination; indeed, he would appear to have called it "varioloid." Was it right, under these circumstances, that a whole ship—crew, passengers, &c.—should be quarantined or not? The patient had since recovery been about his ordinary duties for twelve days, and no one was ailing. Experience has enabled us to draw

a line between the risk of infection from small-pox during the acute stage, and in either the scabbing and after-scabbing period; and if during the most dangerous period of the illness, and for even twelve days afterwards, no spread had taken place, a skilled official well informed as to the natural history of small-pox might well take the responsibility of deciding that the period of danger had so far elapsed that it would not be justifiable to carry out wholesale restrictions. This was done, and, apart from certain precautionary measures of revaccination, the vessel and her inmates were left unhindered, and, no harm resulting, she arrived afterwards at Sydney, where the case was regarded as one of chicken-pox. The article in question lays it down that a health officer must decide prudently, quickly, and decisively, and it adds that "if he practise long without error, he may be called blessed." We hope that mere rapidity and that sort of decision which comes of hastiness will never be allowed to outweigh an attitude of prudence which generally comes with sound knowledge of the subject to be dealt with. In this case the end justified the means. But, had it been otherwise, we could hardly have held that the circumstances, so far as we can gather them, would have justified wholesale hindrances and restrictions rather than a determination to take responsibility in acting on the basis of information, to the acquirement of which many years and exceptional attainments had been devoted.

SANITATION AMONG THE EAST-END JEWS.

IT may be remembered that when our first special report on Sweating was published, in May, 1884, the revelations we then made had, among other good effects, considerable influence with the Jewish Board of Guardians. They realised that the Jewish refugees coming from foreign countries, but more especially from Poland and Russia, where no knowledge of sanitation exists, were likely to degrade the houses in which they lived. A sanitary subcommittee was therefore appointed by the Jewish guardians, and they nominated a special inspector, who was to visit the homes of the Jews in the East-end; and, where necessary, this inspector was to call upon the local authorities to take steps for the abatement of nuisances. Unfortunately the local authorities did not manifest any particular desire to support these voluntary efforts organised by the Jewish Board of Guardians. In the seven months from May to December, 1884—we mentioned the fact at the time,—the inspector visited 1747 houses inhabited by Jews, and found that 1621 of these houses were unprovided with any arrangement for flushing the drains. It required some years to make the authorities realise this fact. But, in the course of time, they took action, and between Jan. 1st and July 1st, 1890, the Jewish inspector visited 880 houses, and found only twenty houses where the drains had no flushing apparatus. In 1884 no less than 93 per cent. of the closets were without flush, in 1890 only 2 per cent. were in this insanitary condition. These figures show what can be done by private initiative when perseverance and tact are combined. The Jewish Board of Guardians and their inspector, Mr. Goodwyn, are to be congratulated on having so largely contributed to wipe away the reproach which, not without reason, was addressed to their coreligionists, who from various parts of the Continent flocked to the East-end of London. Though most of the closets of the houses inhabited by Jews are now provided with water with which they can be flushed, there remain many other defects that should be promptly remedied. Mr. David F. Schloss, the hon. sec. of the Sanitary Committee of the Jewish Board of Guardians, states that the proportion of the houses visited by the Jewish inspector in which the character of the defects existing are such as the local authorities admit they have full power to remedy is still very large. Of the few houses situated in the City, and inspected during the course of last year, one-half were up to the sanitary standard established by the local authorities. In Whitechapel the proportion of satisfactory houses was only 32 per cent.; in Bethnal-green, 25 per cent.; in St. George's, 22 per cent.; and in Mile-end only 15 per cent. Therefore the sanitary condition of the districts in which the Jewish poor reside remains, notwithstanding all these efforts, in a very unsatisfactory state. The report of the year's work gives some description of the sort of defects detected. We are told of closets that have had their drains blocked up for weeks, notably in some "model dwellings," where two inhabited cellars are flooded with sewage. There is another place which for several years had earned an unenviable reputation in consequence of its noxious odours. Here the committee succeeded in causing to be removed from a basement room a great accumulation of refuse, which contained among its varied component parts the bodies of five cats, a dog, and a rabbit. In St. George's-in-the-East three boot finishers were found at work in a front basement room, while the adjoining back basement room was flooded with sewage, which forced its way up a gully supposed to be protected by a bell trap. In connexion with the boot trade, the report notes with satisfaction that a strike of four weeks of the operatives resulted in inducing the manufacturers to abolish home work for "lasting" and "finishing," and this phase of bootmaking will now be done in factories and workshops, and not in the miserable, and often unhealthy, houses where the bootmakers live. When such defects are discovered by their inspector the Jewish sanitary committee first seek to persuade the owners of the insanitary property to put matters right. It is only when the owners fail to act that the committee appeals to the local authority, sending such appeal, according to the nature of the case, either to the sanitary inspector, the factory inspector, the street inspector, the vestry surveyor, or to the water company. Thus the Jewish Board of Guardians does voluntarily and at its own expense a large share of useful pioneering work, which should be accomplished by the local authorities. This is certainly most creditable, and shows a very worthy ambition to do away with the evil repute in respect to sanitation of the Jewish refugees. While congratulating heartily the Jewish Board of Guardians on their initiative and their energy, we would suggest that it does not suffice to inspect houses. It is, above all things, necessary to educate their inhabitants, so that they may understand their duty to themselves and to their neighbours in respect of the requirements of modern sanitation. The influence of the rabbis might be useful in spreading such a knowledge of the importance of cleanliness, and leaflets might be distributed by the inspector which would explain the dangers arising from unwholesome surroundings.

REFORM IN CHARITY VOTING.

THE many persons who have at one time or another laboured to secure the admission of candidates to any public charity must know something of the expense, effort, delay, and frequent disappointment which attend this process. They will not, therefore, feel surprise that the murmurs of discontent have at last found voice in a protest. This proceeds from the Charity Voting Reform Association, and aims at nothing less than the ultimate abolition of the present system of election by votes. Though conscious, however, of possessing some hold upon public sympathy, the reformers have not forgotten that many old customs die hard. They have accordingly tabulated a series of suggestions to form an interim plan of procedure for employment in those institutions the governors of which cannot or

will not as yet forego the use of the present method. By these it is proposed to reduce considerably the number of eligible candidates in any given case, to empower the committees of benevolent associations to select at each election the most deserving applicants, whose names, moreover, should occupy a prominent place in the voting list, and also to enable them to assume and employ the votes of subscribers not themselves desirous of using them. Such modifications would, of course, imply a radical change in existing arrangements. They would, no doubt, greatly facilitate the admission of approved applicants; and if this alone were considered, they could not fail of acceptance. It is very doubtful, however, whether any electorate of subscribers would be willing to surrender the privilege of recommending cases without receiving some guarantee of influence in exchange. Whether any other pledge of such practical utility as the vote can be found the promoters of any philanthropic venture can best determine. In the meantime, it is possible to obtain, without resorting to drastic alterations, some relief of pressure by reducing as proposed the number of allowed candidates, and by granting to committees a controlling voice in the admission of the more obviously necessitous cases.

THE SANITARY STATE OF HASLEMERE.

THE Haslemere Parochial Committee decide to retain impervious cesspools and local wells because of the great expense which, it is alleged, sewerage and water-supply would involve. And the County Council of Surrey have through their Sanitary Committee deferred further action pending the appointment of a county health officer. Dr. Edward Seaton, lecturer on public health to St. Thomas's Hospital, having now been elected to that office, the case of Haslemere will, we assume, soon come forward again.

THE INDIAN MARRIAGE LAW.

MUCH has been said and written respecting the opposition to be encountered by the Age of Consent Bill recently under the consideration of the Indian Government. It has now been successfully shown that this was much overrated. Now there remains only another and a lesser fear, which has probably no very solid foundation—namely, the dread lest the measure, when applied, should lead to police tyranny and to irritating interference with the sensitive tissues of social and religious life. We may rest assured, however, that the Indian Legislature have not so far committed themselves without substantial proof that this reform has wider and stronger sanctions than the mere countenance of a minority schooled in Western ideas. The recent canvass of opinion in the Presidencies brought out the fact that approval of the measure was all but coextensive with the Queen's rule in India. Similar evidence is to be gathered from the pages of a little pamphlet lately published by Babu Baij Nath, B.A., which describes an almost triumphal progress undertaken through the North-West Provinces in 1886 by that well-known advocate of marriage reform, Mr. Behramji Malabari. In a series of gatherings, attended by representative Hindus and convened in some of the most important cities of this wide area, Mr. Malabari was able to prove the existence of a strong popular sentiment in accord with his own views. He also showed that this feeling was in harmony with the doctrines of the primitive religious teachers, and he trained it to recognise the advantage of supporting their authority by modern legislation such as that which has just been carried out. The raising of the age of consent to twelve years of course comes far short of our own ideas of preparedness for undertaking the duties of marriage and motherhood. Still, it is a step in the right direction. As such we welcome it. A later day perhaps will witness yet sounder views respecting the necessity of postponing all concern in these important duties till the term of puberty is well over. This matter, as well as the amendment of existing rules relating to child widowhood, possesses an indisputable claim to early consideration.

THE FACTORY AND WORKSHOP ACTS.

MR. MATTHEWS could not be expected to say much less to the deputation of employers and operatives on the great questions of half-time and factory surgeons than he did. The deputation did their best to show that factory surgeons were an obsolete institution, and that half-time work was beneficial to children as well as to the parents, who in Yorkshire and Lancashire alone received £1,274,000 from such work. Mr. Matthews did not admit his conversion on either of those subjects; but he observed that he felt that the general sense of the House was against him. We are glad he has perceived this undoubted fact. We cannot doubt that the Committee of the House will represent the prevalent feeling on both these points, and we are not without hope that the Home Secretary himself will bow to the general opposition. The party which has the credit of the Factory Acts should not be the party to discharge factory surgeons. The numerous communications which have been published in the medical papers show the high uses of factory surgeons in the matter of child labour.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda Pesth.—Dr. Feuer has been recognised as *privat docent* in Ophthalmology, Dr. Salgó as *privat docent* in Mental Diseases, Dr. Udraniszky as *privat docent* in Chemistry, and Dr. Onodi as *privat docent* in Laryngology. The Physiological Lectures are being delivered by Prof. Paul Plosz in consequence of the death of Prof. Jendrássik.

Giessen.—Prof. Eckhard is about to resign the chair of Anatomy, retaining that of Physiology, which he has hitherto held concurrently. Dr. Honigman, First Clinical Assistant in the Medical Clinic, has qualified as *privat docent*.

Madrid.—Dr. Don Amalio Gimeno, Professor of Hygiene, has been appointed after an open competition to the Chair of Medical Pathology.

Santiago (*Spain*).—Dr. Don J. Farreras y Framis of Barcelona has been appointed to the Chair of Histology.

Strasburg.—Dr. Sedderhaus has been promoted to the rank of Extraordinary Professor.

Tomsk.—Dr. Fortunatoff of St. Petersburg has been appointed Extraordinary Professor of Pharmacology.

Vienna.—Dr. Herzfeld has been recognised as *privat docent* in Midwifery and Gynæcology. He is assistant to Professor K. Braun.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Señor Andrade of Aleu, formerly Professor in the Medical Faculty of Valladolid.—Dr. Emerich Regéczy Nagy, Professor of Physiology in the Veterinary School of Buda-Pesth.

PYOKTANIN or anilin dye has been employed by Professor Eggeling of Teltower in the foot-and-mouth disease of cattle with, it is said, surprisingly good results, the affected parts being syringed out with a solution of the strength of 1 per cent.

WE regret to learn that the condition of Professor Braun von Fernwald has become much worse, there being extreme weakness of the heart's action.

AN outbreak of typhoid fever of a very virulent type, which has caused great alarm, is reported to have taken place at Nant-y-Fflint, a country hamlet situate between Flint and Halkyn. The corporation of Flint have taken very stringent measures to isolate the cases and stamp out the epidemic, and they have also engaged trained hospital nurses to attend to the sufferers.

MR. WILLIAM ANDERSON, F.R.C.S., has been elected Professor of Anatomy at the Royal Academy, in succession to the late Professor John Marshall, F.R.S. We congratulate Mr. Anderson on his appointment, which cannot fail to give general satisfaction.

HIS HIGHNESS SYED ALI, G.C.S.I., Sultan of Zanzibar, has been graciously pleased to confer a decoration (medal) of Kakob-al-Dari (Brilliant Star of Zanzibar) upon Dr. P. B. Nariman, physician and surgeon to his Highness, in recognition of his eminent services to the State.

DR. JABLOKOFF has been appointed to the senior physiciancy of the pediatric department in the Moscow Foundling Hospital.

THE recent Congress of Russian medical men decided that the long-talked-of memorial to Professor Pirogoff shall be erected in Moscow.

REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

THE report of the medical officer of the Local Government Board for the year 1889 has only just been issued, and a not unimportant portion of the volume is taken up with reports of the medical inspectors on certain occurrences of infectious disease, such as enteric fever, diphtheria, scarlet fever, &c., which we have already noticed at the date of their original issue. They embody certain points typical of the circumstances under which prevalences of the specified diseases occur, and hence there is distinct value in thus placing them on permanent record. Dealing with the question of vaccination, Dr. Buchanan again refers to the misuse of the term "insusceptibility." If certificates as to this were to be regarded as trustworthy, we should have to face the awkward fact that insusceptibility to vaccination is twice as frequent in London as elsewhere in the country, we should require to know why in Fulham one child out of 137 is insusceptible, whilst no insusceptibility at all occurs in Shoreditch, and we should have to explain how it is that when the Local Government Board have inquired into this alleged excess of insusceptibility in certain places, no certificate of the kind was found to have been given by a public vaccinator. The vaccination returns for 1887 are those as to which the last complete account is given, and from these it appears that of children born in England and Wales during that year, 7·1 per cent. still remained unaccounted for on Jan. 1st, 1889, and, whether the metropolis or the rest of England be considered, this indicates a growing increase in the number of such default.

The auxiliary scientific investigations were of exceptional interest during 1889, and this especially in so far as diphtheria is concerned. The volume now under consideration gives the detailed report of the discoveries made by Dr. Klein, and of which the principal outcome was at the time submitted to the Royal Society in a paper on the Etiology of Diphtheria. That two forms of bacilli had been confounded under the term "Klebs-Löffler bacilli" has been made clear, and Dr. Klein has succeeded in showing that whilst the two sets of organisms present hardly any morphological differences, yet that they can be differentiated, and this essentially in their conditions of growth. One form of bacillus appears to be benign; it certainly fails to produce any of the typical symptoms and results which follow on the inoculation of certain animals with diphtheria membrane; whereas the other, which Dr. Klein regards as the true diphtheria bacillus, produces amongst cats, for example, the same conditions as have been ascertained to exist in the case of cats suffering from disease contracted in households where diphtheria has prevailed. One of the most interesting differences between the two forms of bacilli is that whereas the pseudo-bacillus fails to multiply on milk at comparatively low temperatures, the true diphtheria bacillus does so multiply, and in milk at the ordinary temperature of the atmosphere—a point of extreme importance in connexion with those occurrences of diphtheria which have taken place as the result of drinking milk from special dairies, and in which the potency of the disease has appeared to be enhanced as the result of the storage of milk in dwelling-houses and elsewhere.

Recalling his experience as to the inoculation of cats with diphtheria membrane, and the resulting production of the diphtheria bacillus in connexion with a disease communicable by cat to cat within the same cage, experiments were then instituted as to the behaviour of milch cows under similar inoculation, and it was ascertained that following on this process cows were found to be suffering from a disease accompanied by vesicular and allied affections of the udder that at once recalled those symptoms which had on several occasions been found to attach to cows the milk from which had been regarded as causative of diphtheria. And, when the contents of the vesicles in question came to be examined, the bacillus diphtheriæ could be demonstrated unmistakably both in cover-glass specimens and in cultures. The disease induced in cows was a mild one, but it was one which was inoculable into calves, and when milk was taken from a cow suffering from the udder affection referred to, bacterial colonies formed within a few days, and in all such there appeared "unmistakably colonies of the bacillus diphtheriæ." Thus a stage is now reached which renders it imperative that this question of the relation of diseases such as diphtheria in the human subject to disease, whether of an apparently trivial sort or not, in cows should be definitely determined, and it seems a pity that the department of State which deals primarily with the health of man should be working alone in this matter.

The volume also contains a suggestive report by Dr. Klein on concurrent inoculation of different infections in the same animal body; a paper by Dr. V. D. Harris on Bacteria in their observed relation with Digestive Processes; and a preliminary contribution by Dr. Sidney Martin on the Chemical Products of the Life Processes of Bacillus Anthracis.

Incidentally, a point is adverted to in this report which is not raised a day too soon. In referring to the illustrations appended to Dr. Klein's contributions on diphtheria, Dr. Buchanan says: "Many of these drawings and photographs ..... are practically worthless for their purpose. Yet they are second attempts made by the lithographers; and upwards of four months have been spent in the production and reproduction of the professing illustrations to Dr. Klein's essay." And Dr. Klein himself is obliged to brand certain of the individual drawings with such words as, "The representations here made fail in reproducing the points of the original photographs." Here we have some explanation of the great delay in the issue of the report. But more, it has long been obvious that the department of Government responsible for illustrations to these and kindred reports utterly fails in its object. The so-called "illustrations" which have appeared in some recent official volumes, and notably in this one and in one not long issued by the Agricultural Department, are such as this country ought to be ashamed of when they are compared with the drawings issued by private individuals or by foreign Governments. Besides which, when diagrams no longer illustrate the points which they were intended to indicate, the expenditure bestowed on them—small as it obviously must be—is thrown away. We trust that some member of Parliament who is alive to the value of scientific research in the promotion of public health will ascertain in the House of Commons to whom the country is indebted for the present state of affairs in this respect.

THE ARMY MEDICAL STAFF.

WE have been favoured by Sir Andrew Clark with a copy of the following correspondence between the Secretary of State for War and himself:—

Royal College of Physicians, London,
March 7th, 1891.

DEAR MR. STANHOPE,—

Immediately on receiving the letter which you did me the honour to address to me as leader of the deputation from the medical corporations of the United Kingdom, on behalf of the grievances of the army medical officers, I placed myself in communication with those bodies for the purpose of ascertaining their views of the replies which you had made through me to their representations. Having now received answers from all of them, and their views being in complete accord with my own, I venture again to address you in this letter, with the desire to promote such an issue to these negotiations as will prove at once just and satisfactory to the medical officers of the army, and of real and lasting advantage to the State.

Although I am well assured of your unaffected desire to deal generously with the army medical officers, and to grant to their just grievances every just and practicable remedy, although I fully recognise the difficulties of your position as a Minister of State, standing between the army, the Government, and the House of Commons, and can understand somewhat of the obstacles in the way of reconciling them to such a reform as we seek, I am constrained to acquaint you with the unanimous judgment at which we have arrived—that the concessions made to our representations are, with one exception, unsatisfactory, and that they fall far short, not merely of what is claimed by the medical officers, but also of what has been recommended by Parliamentary and War Office Committees, and of what has been regarded as just by men experienced in public affairs.

For my own part, I regard this unhappy result as due to the strange misapprehensions and the inaccurate statements of those who have supplied you with technical information upon the subject; and I cannot understand how our arguments should have been met by replies which could be immediately refuted by reference to official regulations. This is a grave statement to make, and did I not know that in dealing one by one with the paragraphs of your letter I should be able to make the statement good, it would not assuredly have been made.

Here, in order to illustrate this allegation, and to prove its accuracy, I must anticipate what I shall have to say at the close of this letter.

It is averred that "*to incorporate the medical staff into the general army, and to give its officers substantive rank and military titles ..... would have the effect of placing a medical officer in military command over troops in the field whenever one might happen to be the senior officer present.*" Now this is the supreme objection made to conceding the claims of the medical officers, and, strange to say, it is absolutely without foundation, for in various places in the books of official regulations express provision is made for the granting of rank and title without command in the field, and for the granting of rank and title either with no command at all, or with such a limited command as may be defined on appointment. In the Royal Warrant of 1890, paragraph 69A, we read as follows:—"An officer permanently transferred from the commissariat and transport staff to the supernumerary list of our Army Service Corps shall not hold any military command outside our Army Service Corps, except over such officers and men as may be specially placed under his command." "An officer of our Army Service Corps detailed for barrack duties shall not hold any military command, except over such officers and men as may be specially placed under his command." And again, even more explicitly, we read in paragraph 70 that "an officer of our army employed in any of the cases specified in Article 55 (*h*) or (*i*) shall not be entitled by virtue of his military rank to assume any military command in our regular army, unless called out for military duty by our Secretary of State." Surely neither the claims of reason nor the necessities of experience could require more conclusive proof that the granting of military rank and title does not necessarily imply or involve the granting of military command in the field.

With your permission I will now proceed to deal with those paragraphs of your letter which have a crucial bearing upon the questions under discussion.

Paragraph 10.—You state that the only way of lengthening the home service of medical officers is to increase the numbers employed at home; that this could be done only by employing them upon duties which would occupy but a small portion of their time; that they would thereby lose experience and deteriorate in professional knowledge; that an increase of establishment necessary to lengthen the period of home service would cost £27,000 a year; and that therefore you are unable to grant this request. Now I must be permitted to point out that this subject has not been brought fairly before you, and that this answer is entirely irrelevant to the relief sought for by the army medical officers. They do not ask for a shorter term of foreign service, and they do not ask for a longer term of home service. They only ask for a shorter term of *continuous* foreign service; they ask only to be restored to the rule which was in operation before 1888; they ask only that, unless in cases of State emergency, the term of continuous foreign service should be limited to five years instead of six years; and they allege—justly, I think—that the granting of this relief would not only not lengthen, but distinctly shorten, the duration of continuous service at home. This relief is asked by the army medical officers on grounds not less important to the State than to themselves. It has been found that the additional year of foreign service imposed in 1888 upon the army medical officers, more exposed than any others to the active causes of disease, has notably increased the rates of their sickness and mortality, and has, without compensating advantage to the State, added to its burden a growing list of non-effective medical officers. Furthermore, it was declared by your own committee, the Camperdown Committee, that the grounds upon which this relief was sought were just grounds, and they recommended that the new rule should be abrogated and the old rule restored. Finally, having regard to the conduct of medical affairs before 1888, when the term of continuous foreign service, which acted well, was enlarged from five to six years, to the fact that the number of medical officers is about the same now as it was then, and to the circumstance that facilities for drafting are greater at present than at any former period, and that the services of medical officers may be utilised in the troopships so employed, there does not appear to exist any valid reason why, if this request were granted, the somewhat more frequent transport of medical officers, involved in the grant, should necessitate the introduction of new machinery, the enlargement of some existing establishment, or any material addition to present expenditure.

Paragraph 2.—Your concessions as to the conditions for the granting of sick leave to medical officers have been received with uniform and grateful satisfaction, not only by the Army Medical Staff, but also by the whole body of the medical profession which takes an active interest in the just settlement of the questions considered in this correspondence.

Paragraph 3.—In reply to the complaint that the army medical officers do not receive a fair share of the honours and rewards conferred upon officers generally for exceptional services to the State in warlike and other expeditions, you observe that such rewards can hardly be made a matter of proportion, and that the granting of them must necessarily depend on the opportunities which officers, whether combatant or medical, have of distinguishing themselves. The force of these general remarks need not be denied; but the contention of the army medical officers and the contention and recommendations of Sir Ralph Thompson's Committee do not lie within their limits. The contention of the army medical officers is that, in like circumstances of perils encountered, hardships endured, and services rendered in successful expeditions, they should obtain a fair share of the honours bestowed upon such occasions. The contention of Sir Ralph Thompson's Committee of 1878 is that, judged by the standard about to be mentioned, the medical officers are far below the combatant ranks in their enjoyment of the honours of the Bath, the Star of India, and the Star of St. Michael and St. George; and the committee recommends that in regard to honours, rewards, and good service pensions the medical department should be judged rather by the standard for combatants than by that for non-combatants. I am aware that it is contended by the combatant officers of the army that the medical department receives more than

its fair share of honours and rewards. His Royal Highness the Commander-in-Chief asserts that the army medical officers "have absolutely got such an excess of honours and rewards at the present time that we cannot give them any now," and he adds that the "honours and rewards are all apportioned most carefully." Sir Archibald Alison, Lord Wolseley, General Harman, and other distinguished combatant officers follow in a similar strain. As a matter of fact, however, these statements are incapable of sustaining any critical examination, and a reference to official returns brings immediately to light the conclusive evidence of their complete inaccuracy.

In illustration of the gravely inaccurate information with which you have been supplied on this subject, let me compare the honours bestowed upon the Engineers with honours bestowed upon the Army Medical Staff.

	Strength of the Royal Engineers. 707	Strength of the Army Medical Staff. 841
G.C.B.	2	0
K.C.B.	5	1
C.B.	7	7
G.C.M.G.	2	0
K.C.M.G.	1	0
C.M.G.	10	1
C.I.E.	2	0
D.S.O.	10	6
	39	15

Percentage of honours to strength, R.E., 5·6 A.M.S., 1·7.

Furthermore, of the Egyptian decorations conferred in 1882 the percentage to strength was:—

For the Ordnance Store Department	57
For the Commissariat Department	27
For the Medical Department	7

Finally, in respect of the Nile Expedition of 1884, the percentage to strength of promotions among departmental officers was as follows:—

Chaplains	44
Pay Department	41
Ordnance	30
Commissariat	13·8
Medical Staff	7·9

Such illustrations could be largely added to; but I have adduced already a number sufficient to show that whilst the contentions of the medical officers of Sir Ralph Thompson's Committee and of Director-General Crawford are grounded on official records and are accurate, the contention of the combatant officers is grounded on merely emotional impressions and is inaccurate.

In view of these facts, and especially in view of this further fact, that more than one War Office Commission has recognised the existence and acknowledged the justice of this ground of complaint, we have received with disappointment your decision on this subject.

The matters alluded to in paragraphs 4, 5, 6, and 7 are not of serious importance to the settlement of the main question at issue, and, having been mentioned more by way of illustration of the chronic attitude of mind preserved by combatant officers and high officials towards the medical officers than for the purpose of making any present claim for their reform, are herewith set aside. Nevertheless such matters have some importance, and men of the world acquainted with military organisation, the drift of social opinion, and the general tendencies of the age will think it neither wise nor safe entirely to ignore them.

Permit me to give two illustrations of the matters referred to in the paragraphs specified. When Surgeon-General Sir Anthony Home received the Victoria Cross for his heroic defence of the wounded in a street at Lucknow, he was the only officer decorated on the occasion who was not afterwards invited to the Palace. He felt the slight so keenly that for years afterwards he refused to wear the decoration which he had so honourably won. Again, and in like manner, when Surgeon Reynolds received the Victoria Cross for his gallant conduct at Rorke's Drift, his companion, an officer of Engineers, was afterwards invited to the Palace, but Surgeon Reynolds was passed over unnoticed. He did not belong, one might infer, to the same caste, and he was therefore unfit to sit with any combatant officer above the salt. To those who do not understand the ways of the world of military life these may seem to be small things unworthy of consideration, but to those who enter into the constitution of military society, and to most persons who understand it aright, they are symbols of things which in the aggregate become serious, inasmuch as they tend to foster discord, disaffection, and distrust, and to man with growingly inferior persons a department upon which the nation depends for the safety of its army in peace and for the conditions essential to its success in war.

Paragraph 8.—In this paragraph you are pleased to concede to the army medical officers the composite titles recommended by the Camperdown Commission, and you "trust that this concession will put an end to the regrettable agitation which has obscured the true bearings of this important matter." Unfortunately, however, this is the concession of title alone and of nothing else. But it is not *title by itself* for which the medical officers contend: it is for some such title as will carry with it the guarantee of substantive rank; since they declare that without such rank they are unable to discharge in the prompt, thorough, and acceptable manner which they desire the military duties and responsibilities now imposed upon them; and they earnestly maintain that title without an accompanying guarantee of substantive military rank is absolutely worthless for the remedy of any grievance of which they have just cause of complaint. This contention of the army medical officers has received a kind and measure of support perhaps never before accorded to any like demand for class reform. It is supported by the experience of the armies of Italy, Switzerland, Holland, Turkey, the United States, and of several other countries; by the opinion of all the medical corporations of the United Kingdom; by the conclusions of almost all bodies of men who have judicially investigated the question; and even by the approval of a rapidly growing number of combatant officers. Furthermore, this plan of incorporating the medical officers into the general army and giving them substantive rank therein has never hitherto failed, where it has been tried, to allay dissatisfaction, to promote unity and efficiency of action, and to secure for the medical service higher men and better work.

But there lies in this question still another fact, which, although it is at the root of the whole discussion and of the first importance in its just settlement, has been either overlooked or ignored by your military advisers. Army medical officers are not merely doctors; they are doctors whom the progress of ideas and the march of modern warfare have made of necessity soldiers also; and the further they advance in the service the more important and the more purely military their duties become. As surgeon, the army medical officer has to discharge all military duties and responsibilities except the one of actual fighting in the field. Chief among them I may mention the command and discipline of the Medical Staff Corps and of all persons either attached to the corps or else on duty in the military hospitals, the instruction of the corps in infantry and stretcher drill, the management of the pay, clothing, and general equipment of the Medical Staff Corps, the accounting of officers for hospital buildings, general supplies, and necessary stores, the study of military law and its administration in minor offences. Furthermore, in charge of a field hospital and responsible for a hundred sick, he has military command of four officers and a hundred and seventy-one non-commissioned officers and men; whilst in charge of a bearer company in action, and possibly under fire, he has military command of three officers and one hundred and one non-commissioned officers and men, and he may himself have to fight in defence of his sick. As a surgeon-general, the army medical officer has the military command of nearly three hundred officers and of fifteen hundred non-commissioned officers and men of the medical staff and the Medical Staff Corps; he has the control of probably two thousand sick, and he has to settle in all its complexity of details the medical organisation which may become necessary for the injuries and diseases of forty thousand men.

It seems to me that to deal with an official having responsibilities of such moment as if he were merely a doctor, as if he were not a real officer, as if he were not entitled to rank as combatants rank, and as if he were not worthy of being incorporated into the general army, is at once a serious anomaly, a tactical mistake, and a grave injustice. For if this surgeon-general were not acquainted with military organisation, if he had not studied the economy of armies, if he did not understand military

strategy, if he were not capable of making adequate provision for transport and of establishing secure bases for supplies, if he were not experienced in the command of men, and if he were not in heart as true a soldier as any on the field, he would be utterly incapable of making those preparations for action without which, in the present day, it is probable that no great battle could be fought and won.

And now, in the last place, as respects the supreme objection to the granting of substantive military rank to medical officers—the objection that it implies and involves the granting of military command in the field,—I venture to remind you that in the beginning of this letter I have conclusively proved from the Royal Warrant of 1890 that this objection has no valid existence, and that definite provision has been made for the granting of rank and title in special circumstances without command. And I may be permitted further to remind you that at this time there are to be found in the army numerous officers of almost all ranks who have no combatant command. The granting of substantive rank to medical officers, therefore, would and could do no more than confirm them in the command with which they are already invested over the Army Medical Corps, and enable them to discharge their duties unencumbered by the trials and difficulties with which they are now surrounded.

The more widely I have considered this subject of the grievances of the army medical officers, and the more critically I have weighed what has been said on both sides of the discussion, the more deeply have I become convinced that those grievances are just, that they require but one remedy for their cure, that no other but this one remedy will succeed in curing, and that to the adoption of it no sound and substantial objection can be taken and maintained. In the presence of this conviction I pursue no further the exposure of the misapprehension and inaccuracies which have crept into the "combatant" side of the discussion. I set aside as covered and satisfied by the main issue all collateral questions of loss of pay, place on courts-martial, comparison with Engineers, and others referred to in your letter, and I content myself with declaring on the part of the medical corporations of the United Kingdom, whom on this occasion I have the honour to represent, their unanimous judgment that the only remedy for the full and just relief of the grievances of the army medical officers is the conversion of the whole Army Medical Department into a Royal Army Medical Corps, and the granting of substantive military rank and title to all its officers.

We firmly believe that if this conversion were effected agitation and disaffection would cease, frequently recurring discords and difficulties would disappear, unity and concord would be restored, the best order of men would seek the medical service, and the naturally high and generous instincts of the combatant officers would soon reconcile themselves to a change which could not fail to bring about increasing advantages to the soldier and higher service to the State.—I am, dear Mr. Stanhope, yours faithfully,

The Right Hon. Edward Stanhope, M.P., Secretary of State for War. ANDREW CLARK.

War Office, Pall Mall, S.W.
March 17th, 1891.

SIR,—I have the honour to acknowledge your letter of the 7th inst. You refer to the concessions made in my letter of Feb. 2nd as unsatisfactory, and again impute that condition of things to the "strange misapprehension and inaccurate statements" of those who have supplied me with the information which you say can be immediately refuted by reference to official regulations.

In proof of this most serious allegation, you quote paragraph 8 of my letter, and you then show, from military regulations, that military rank does not necessarily carry more than a limited command, and can be, and often is, limited in its scope; and you therefore characterise my objection to incorporate the Medical Staff into the general army as absolutely without foundation. These are strong statements, and they are as wrong as they are strong.

In your letter of Jan. 17th you asked for "the transformation of the whole department into a Royal Army Medical Corps with definite rank and title to all its officers and its *organic incorporation into the general army on the lines followed in the case of the Royal Engineers.*" These words carry but one meaning to my mind, and to that meaning there must be the fatal objection described in my letter, and I can only conceive that you labour under a total misapprehension of the powers of officers of the Royal Engineers.

I am quite aware that the function of command can be limited, and in the same paragraph I pointed out that medical officers actually have this limited command, which they derive from the substantive rank given them by their commissions.

As regards the length of foreign service of medical officers, you say that my answer is "entirely irrelevant to the relief sought for." I should be very sorry if I had consciously or unconsciously misrepresented what these officers wish for, but I would point out to you that your mention of the subject was of the baldest possible description, and from your reference to the Camperdown Committee I was led to suppose that your proposal was identical with the recommendation of that Committee. That recommendation was that continuous service abroad should not exceed five years, and that more home service should be given to army medical officers by employing them in posts now filled by retired medical officers (*vide* paragraph 5 of report).

It was to this that my remark as to the great expense of the change applied. If, however, what is asked for is merely a slight rearrangement of the periods of foreign service not involving longer home service, I will consider what I can do to meet their wishes. I should, however, say that such a concession would be a doubtful boon, and might possibly not be appreciated by many of the officers concerned. Such shortened periods of foreign service would mean more frequent changes, and each change of station means some cost to the officer.

As regards the grant of honours, I can only repeat what seems to me to be a self-evident proposition—viz., that it cannot be made a matter of proportion, but must depend on the opportunities which officers have of distinguishing themselves. The fact that the Engineer honours are for the moment in excess of those enjoyed by the Medical Staff in no way lessens the force of my statement.

The Engineers obtain rewards for services not only in the army but in innumerable civil positions, and they have that very qualification of command which you admit should not be given to officers of the Medical Department. If you will eliminate from the list you give of Engineer rewards those gained in civil and colonial employ and in high command, you will find the two lists are not disproportionate.

On the question of Court privileges, I have already said that I would consult with the proper authorities.

The concluding portion of your letter rejects the concession which I made in accordance with your own suggestion. You say that medical officers "contend for some such title as will carry with it the guarantee of substantive rank to enable them to discharge the military duties and responsibilities now imposed on them." On this point there is evidently some misunderstanding on your part. Substantive rank Army Medical officers already have by virtue of their commissions to the full extent you ask for, and no grant of military titles of any description will change or increase it.

I regret very much to be at variance on this point with the distinguished profession which you so ably represent, but I am satisfied that it is not desirable to give medical officers the power to assume the active command of troops in the field or in quarters, and that were I to allow their formation into the corps you propose, and their "organic incorporation into the general Army on the lines followed in the case of the Royal Engineers," this command could not be denied them. I am not therefore prepared to do more than give the composite titles which, as I have already remarked, was your own proposal, and which was also the recommendation of Lord Camperdown's Committee, of which representatives of the profession nominated by the Royal Colleges of Physicians and Surgeons were members.

Having therefore adopted one of the alternatives which you have yourself put forward, I do not think that any object would be gained by any further correspondence on the subject.

I have the honour to be, Sir, your obedient servant,
EDWARD STANHOPE.

Sir Andrew Clark, Bart, M.D., F.R.S., &c.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE annual general meeting of the Irish Medical Schools' and Graduates' Association took place at 11, Chandos-street, on March 17th (St. Patrick's Day).

In the absence of the retiring President, Dr. Kidd, F.R.S., of Dublin, the chair was taken by Sir Thomas Crawford, K.C.B., who presently vacated it for Dr. Gilbart-Smith, the President for the coming year. A vote of thanks was passed to the retiring president, Dr. Kidd. In the annual report of the Council, which was adopted unanimously, mention was made, amongst other matters, of the action of the Association in respect of the Midwives' Registration Bill, and of the disabilities of Irish diplomates in regard to appointments on the honorary staff of certain hospitals. It was announced that the Association now numbered more than 660 members, most of whom reside in England.

The following officers were elected:—President-elect: Director-General Dick, C.B., R.N. Vice-Presidents: Professor Gerald Yeo and Sir Thomas Crawford, K.C.B. Fifteen gentlemen were also chosen to serve on the Council for the ensuing year.

The annual dinner took place the same evening at the Holborn Restaurant, where Dr. Gilbart-Smith presided over a large and representative company. The guests of the evening were Sir G. Murray Humphry and Canon Teignmouth Shore. A congratulatory message was read from Sir Andrew Clark, expressing also his regret that he was unable to be present. The toasts were "Our Sovereign," "Our Defenders," "Our Guests," and "Ourselves." These were handled in a lively and entertaining manner by the President, Dr. Macnaughton Jones, Director-General Dick, Surgeon Parke, Professor Macalister, Sir George Humphry, Canon Shore, and the President of the Royal College of Surgeons in Ireland. Between the speeches a selection of Irish songs was admirably rendered by Messrs. Groome and Clive. The Association may be congratulated on a very enjoyable and successful entertainment.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wakefield Rural District.—The corrected death-rate for this district during 1890 is given by Mr. John W. Walker as 17·2 per 1000; and in view of the fact that amongst the attacks of infectious diseases notified there were 168 cases of scarlet fever, 34 of typhoid, and 38 of diphtheria—240 in all—Mr. Walker urges that efforts should be made to induce people to use the isolation hospital at Carr Gate more than they do. He finds occasion to point to the advantages of free admission to the hospital; and we may therefore assume that herein lies the difficulty experienced. Why people should pay to go into a hospital erected at the cost of the rates for the purposes of protecting the health of the public must be, to all, an enigma. If it is preferred that cases of infection should be left scattered about, for the sake of a pecuniary trifle, it seems a pity to spend money on hospital construction and maintenance. An interesting portion of the report deals with lead poisoning, and it is stated, on the authority of a chemical expert, that "the Wakefield water after prolonged contact with lead—e.g., twelve hours—should not be used for drinking purposes." But a table appended shows, amongst other things, that whereas water after standing in a lead pipe has 0·6 gr. of lead per gallon, and a lead dissolving power estimated at 14, water merely passed through a lead pipe without standing in it has the same amount of lead in it, and has a lead dissolving power of 17. The one sample is, to say the least, as bad as the other in this respect.

Sandal Magna Urban District.—This district also receives the Wakefield water, and Mr. Walker supplies the same information as to the lead-dissolving character of the water drawn from the pipes after standing and otherwise. The general death-rate was 15·71 for 1890, and the compulsory notification of infectious diseases seems to work satisfactorily. The general current sanitary work was evidently well maintained throughout the year.

Hove Urban District.—Estimating the population at 27,000, Mr. Ernest Medcalf gives the death-rate for Hove as 12·7 per 1000 living during 1890, the zymotic rate being 1·4. The notification of infectious diseases is stated to have been of great utility in securing early isolation, and the number of patients having substantially increased at the isolation hospital, it has been decided to erect another ward pavilion.

Exeter Urban District.—Dr. J. Woodman and his colleagues report, as to the Exeter Sanatorium, that 107 cases were admitted during 1890, 88 of these being scarlatina patients. In all, 673 cases have been isolated since 1882, and in a number of instances disease has been prevented from spreading. The Diseases Notification Act, which has now been in working over a year, has materially aided in the results obtained last year, and has facilitated the isolation of infectious cases which called for removal from their homes at an early date; indeed, in some cases immediately on their becoming known. The patients are referred to as appreciating the care bestowed upon them. The admissions in 1890 exceed those for any previous year, and this goes to confirm the view that the advantages of early isolation are increasingly appreciated.

Melton Mowbray Rural District.—Mr. William Tibbles records a death-rate of 15·3 per 1000 during 1890. This represents an excess on the rate for 1889; the causes of the excess being the severity of the influenza epidemic, and to a lesser degree a prevalence of scarlet fever. But it is also recorded that enteric fever and diphtheria were at their lowest ebb. In a number of villages systematic house-to-house inspection was carried out, and such conditions found as were deemed to call for amendment in the interests of public health were dealt with. Some addition was also made to the system of public drainage.

Wirksworth Urban District.—In this district, with a population considerably under 4000, the death-rate for 1890 was 21·3 per 1000, and even the mean for the past ten years—namely, 18·6—is needlessly high. Mr. A. E. Broster, indeed, calls for a house-to-house inspection, and he indicates certain general causes of excessive mortality, such as sewer emanations, effluvia from foul closets, and insufficient house ventilation. These are typical causes of an increase of sickness and death, and are such as often do mischief without actual death being easily identifiable with them. There appears to be a system of removal of privy contents at fixed charges. Hardly anything conduces more to nuisance; the people generally like, in view of the fixed charge, to have what they call a good-sized privy which does not often need emptying. Hence large accumulations occur, and attempts to reduce the privy pits so as to prevent these accumulations fail. The authority should undertake the work themselves in the proper way. If they do it at all, they have no legal right to charge for it.

Liverpool Port Sanitary District.—During 1890 the number of vessels entering the port of Liverpool was 23,085, and of these 3372 were inspected, with the result that 270 were found defective. According to Dr. Stopford Taylor, the condition of the British vessels is on the whole very satisfactory, and it is quite clear that labours such as are carried out in the port of Liverpool constitute an important agency in bringing about that result. Amongst the cases of sickness met with was one of leprosy, the patient being a Swedish emigrant, who was detained and returned to her own country. Such emigrants as are found to be ill are removed to hospital, and the two infectious hospitals belonging to Liverpool have proved useful in this respect. Disinfection and other precautionary measures are also adopted.

Whitechapel.—Mr. Loane estimates the death-rate for Whitechapel during the past year at 24 per 1000, and he discusses the causes of this mortality in some detail. He also gives separately the deaths from certain specified causes in the model dwellings. In view of the work of improvement as regards dwellings which is going on in Whitechapel, a detailed account is given in the report of the conditions which, according to the general consent of the metropolitan medical officers of health, are to be egarded as constituting a "condition dangerous or injurious

to health" under the Act of 1890, as to the housing of the working classes. They relate to site, construction, age, and want of repair, and nuisances; and though no general code can serve for application to every individual case, the rules laid down will doubtless be of some service.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 6343 births and 4196 deaths were registered during the week ending March 21st. The annual rate of mortality in these towns, which had declined from 24·1 to 22·1 per 1000 in the preceding three weeks, further fell to 21·9 last week. The rate was 20·3 in London and 23·1 in the twenty-seven provincial towns. During the past eleven weeks of the current quarter the death-rate in the twenty-eight towns averaged 23·3 per 1000, and exceeded by 0·4 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 12·6 in Derby, 16·5 in Birkenhead, 17·0 in Brighton, and 17·4 in Nottingham; the highest were 29·2 in Portsmouth, 29·5 in Preston, 33·5 in Huddersfield, and 36·0 in Blackburn. The deaths referred to the principal zymotic diseases, which had been 470 and 413 in the preceding two weeks, rose again last week to 449; they included 181 from measles, 117 from whooping-cough, 52 from diphtheria, 39 from "fever" (principally enteric), 38 from diarrhœa, 22 from scarlet fever, and not one from small-pox. These diseases caused the lowest death-rates in Derby, Hull, and Wolverhampton, and the highest rates in Huddersfield, Salford, Portsmouth, and Blackburn. The greatest mortality from measles occurred in Bristol, Plymouth, Leeds, Huddersfield, Portsmouth, and Blackburn; and from whooping-cough in Huddersfield, Leicester, Liverpool, and Salford. The mortality from scarlet fever and from "fever" showed no marked excess in any of the twenty-eight towns. The 52 deaths from diphtheria included 33 in London, 5 in Manchester, 3 in Salford, 2 in Liverpool, and 2 in Newcastle-upon-Tyne. No death from small-pox was registered in any of the twenty-eight towns; two small-pox patients were under treatment in the Metropolitan Asylum Hospitals, and one in the Highgate Small-pox Hospital, on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1126, and showed a further decline from recent weekly numbers; the patients admitted during the week were 91, against 87 and 64 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 685 to 581 in the preceding three weeks, further fell last week to 556, but exceeded the corrected average by 27. The causes of 81, or 1·9 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Brighton, Portsmouth, Norwich, Plymouth, Derby, and Bolton; the largest proportions of uncertified deaths were recorded in Liverpool, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the preceding five weeks from 21·4 to 26·2 per 1000, declined to 25·9 during the week ending March 21st, but exceeded by 4·0 the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 15·5 in Leith and 18·6 in Aberdeen to 31·5 in Paisley and 32·2 in Glasgow. The 676 deaths in these eight towns show a slight decline from the number in the preceding week, and included 32 which were referred to whooping-cough, 24 to measles, 5 to scarlet fever, 5 to diarrhœa, 4 to "fever," 3 to diphtheria, and not one to small-pox. In all, 73 deaths resulted from these principal zymotic diseases, against 79 in each of the preceding two weeks. These 73 deaths were equal to an annual rate of 2·8 per 1000, which exceeded by 0·5 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 34 and 31 in the previous two weeks, were 32 last week, of which 19 occurred in Glasgow, 5 in Edinburgh, and 4 in Leith. The deaths from measles, which had increased from 18 to 23 in the preceding three weeks, were 24 last week, and included 13 in Paisley and 10 in Glasgow. The 5 fatal cases of scarlet fever corresponded with the number in the previous week, and included 3 in Glasgow. The deaths from diphtheria, which had been 5 and 6 in the preceding two weeks, declined to 3 last week, all of which occurred in Glasgow. The 4 fatal cases of "fever" corresponded with the number in the previous week. The deaths referred to diseases of the respiratory organs in these towns, which had been 146 and 201 in the preceding two weeks, declined last week to 194, but exceeded by 65 the number in the corresponding week of last year. The causes of 61, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined from 29·4 to 28·1 per 1000 in the preceding three weeks, rose again to 28·4 during the week ending March 21st. During the first eleven weeks of the current quarter the death-rate in the city averaged 30·8 per 1000, the rate for the same period being 23·0 in London and 21·3 in Edinburgh. The 192 deaths in Dublin slightly exceeded the number in the preceding week, and included 5 which were referred to whooping-cough, 4 to "fever," 2 to diphtheria, and not one either to small-pox, measles, scarlet fever, or diarrhœa. Thus the deaths referred to the principal zymotic diseases, which had been 4 and 8 in the preceding two weeks, further rose last week to 11; they were equal to an annual rate of 1·6 per 1000, the rate from the same diseases being 1·8 in London and 1·3 in Edinburgh. The deaths referred to whooping-cough showed an increase of 2 upon the number in the previous week; while the 4 fatal cases of "fever" corresponded with those recorded in the preceding week. The deaths from diphtheria, which had been 2 and 1 in the previous two weeks, were 2 last week. The 192 deaths in Dublin last week included 31 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons were below those recorded in the previous week. Four inquest cases and 3 deaths from violence were registered; and 63, or nearly a third, of the deaths occurred in public institutions. The causes of 20, or more than 10 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon John George Stephen Lewis is placed upon temporary half pay on account of ill-health (dated March 6th, 1891).

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Chas. Stewart Young, having resigned his Volunteer appointment, ceases to be an Officer of the Army Medical Reserve of Officers (dated March 25th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeon W. R. White, M.B., to the *Hotspur* (dated April 26th, 1891). Surgeons: Edward H. M'Sherry to the *Duke of Wellington*, additional, temporarily (dated March 20th, 1891); Robert Hill to the *Research* and Thomas Rowland to the *Triton* (both dated April 1st, 1891); Wm. Tait to the *Partridge*, Alexander G. Andrews to Bermuda Hospital, William M. Craig, M.B., to the *Severn*, and Hamilton E. L. Earle to Hongkong Hospital (undated); Joseph H. Whelan to the *Racoon* (dated April 2nd, 1891).

VOLUNTEER CORPS.—*Artillery:* 1st Edinburgh (City): Surgeon J. M. Ross, M.B., resigns his commission (dated March 25th, 1891).—2nd East Riding of Yorkshire (Western Division, Royal Artillery): Surgeon W. Barter, M.D., resigns his commission (dated March 21st, 1891).—3rd (Dumfries) Volunteer Battalion, the King's Own Scottish Borderers: Acting Surgeon W. D. Grieve, M.B., resigns his appointment (dated March 25th, 1891).—3rd Middlesex: Acting Surgeon H. Cooper resigns his appointment (dated March 21st, 1891).—2nd Cadet Battalion, the Queen's (Royal West Surrey Regiment): Charles Swaby-Smith, Gent., to be Acting Surgeon (dated March 21st, 1891).

Correspondence.

"Audi alteram partem."

THE REVISED SCHEME OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—Without going into the many other questions which might well be discussed in connexion with the above scheme, one very obvious objection, it seems to me, exists to it from the point of view of the graduates of the University—viz., *the very inadequate representation of Convocation upon the new Senate*, which the new scheme proposes.

According to the scheme, Convocation is to be allowed to elect only ten (10) Fellows of the University out of fifty-two (52); or less than one-fifth of the total number of Fellows of which the new Senate is to be made up. The medical graduates are to be allowed *only two* (2) representatives (or, alternately with the Faculty of Arts, 3)—in other words, *the medical graduates will have a twenty-sixth to one-seventeenth part of the voting power in the governing body.* It will be generally conceded that one of the chief obstacles which has existed in the past in the way of making graduates of the London University take a due interest in the affairs of what, after all, is *their* university (in spite of the opinion which appears to prevail in some quarters that they should be allowed no voice in its reconstruction) has been the fact that the Senate practically ignores the expressed wishes of Convocation in nearly every case, and that it is quite out of touch with the graduates of the University of which it is the governing body. The constitution of the Senate was, perhaps, necessary when the University was first founded, but now, when there are thousands of graduates from which to select a governing body, to continue even the present arrangement is an anachronism; but the new Senate is to be formed in a way which, from the point of view of the legitimate representation of the graduates, is worse than the original. The graduates will have less voice than ever in the government of the University. It will be said, no doubt, that, although the graduates will have less *direct* representation, they will have more *indirect* representation, since most of the medical graduates, for instance, belong to one or other of the Royal Colleges or to one or other of the medical schools. In reply to this, however, we may venture to ask what guarantee is there that all or any of the representatives elected by these bodies will be graduates of our own university? As a matter of fact, excepting certain members of the Senate, who are, as it were, almost bound officially to support it, the chief part of the advocacy of the scheme has been carried on by gentlemen who are not graduates of the University. These prominent advocates will certainly be as likely, and probably will be more likely, to be sent as representatives of various bodies upon the Senate. They would not be likely, nor would they be expected, to make the interests of the graduates their first consideration. It follows, therefore, that the interests of the graduates, as graduates, will be in the hands of a mere fraction of the Fellows of the Senate. Is not this, Sirs, obviously unfair? It seems to me that Convocation would be unwise to accept so inadequate a representation.

Yours very truly,

Wimpole-street, W., March 20th, 1891. V. D. HARRIS, M.D.

THE PULSE IN ANGINA PECTORIS.

To the Editors of THE LANCET.

SIRS,—A letter by Dr. Sainsbury in your number of to-day represents me as having, along with some others, "definitely accepted" the statement "that during an attack of angina the pulse may be unaltered in character." I could indeed, without much sense of individual responsibility, have accepted (in such good company, too) a tradition that has come down to us apparently from Heberden himself, were it not that in the article published in 1877 by Dr. Reynolds these words occur, p. 540: "But it is *difficult to accept without hesitation* the statement of some authorities that, throughout the attack, the pulse may be entirely undisturbed, either as to its rate of frequency or as to its characters." Dr. Sainsbury will himself see that this position is as nearly as possible the opposite of that which he assigns to me; and I will add that I have not as yet encountered anyone of authority who, *giving accurately the results of personal observation*, or with modern means and appliances, has confirmed the statement in question, supposed to be now "definitely accepted." The question being of some importance in the pathology of angina, I will venture to occupy your space for a few lines more in order to show how, according to the view I hold of it, the traditional statement has arisen. In Heberden's first memoir the statement is in these words: "The pulse is, *at least sometimes*, not disturbed by this pain" (Medical Transactions, 1768). In his Commentaries (1796) the statement is made in less qualified terms, but also in terms that betray more distinctly a theoretical bias, as follows: "Arteriæ eorum, qui in hoc dolore sunt, naturaliter prorsus moventur ..... *in ipsa accepione pulsus non concitatur.*" Now, in quoting these phrases, I pointed out that "several authors have followed Heberden here without observing that his real meaning is not that there is no alteration of the pulse (*in ipsa accepione*), but that there is no excitement of it—i.e., that the pulse is not quickened (*non concitatur*) as in inflammation." The kernel of Heberden's pathology was that angina pectoris is *not* an inflammation, but a spasm, or, as we should now say, a neurosis (*distensio nervorum*); and accordingly the pulse, he virtually affirms, does not obey the rule of alteration observed in inflammations. But it is a long stride from this to the assumption that in a severe, still more in a fatal, paroxysm of angina there *may* be *no* alteration at all, and *no* evidence of heart failure. This conclusion was, in fact, distinctly disputed by Dr. Parry (1799) within a few years of Dr. Heberden's last publication on the subject; and in referring to this in the article in question I add: "Such personal experience as I have on the point leads me to agree with Dr. Parry." But it is not easy, of course, to get evidence that is beyond question on this subject. In many cases of sudden death from angina pectoris there is practically no evidence at all as to the facts immediately preceding the fatal event. In others (as in the famous case of Dr. Arnold, recorded in Dr. Latham's book) the evidence, so far as it goes, is entirely adverse to Heberden's assumption or apparent conclusion. Everyone of course admits that *in the intervals* of the severe paroxysms the pulse *may* be apparently that of health; but if this conclusion is to hold as regards the whole course of the paroxysm, it must be on the strength of observations as yet unknown to me, and which it would be very desirable even now to have set forth in exact language and from personal observation.—I am, Sirs, yours faithfully,

Glasgow University, March 21st, 1891. W. T. GAIRDNER.

THE HYDERABAD COMMISSION AND THE USE OF CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—Surgeon-Major Lawrie's personal reference to me calls for a brief reply. My paper was not intended to instruct in the elementary methods of administering chloroform, so I omitted details which I thought were familiar to all who had mastered the subject of chloroform administration, and were not so wedded to one method as to allow themselves to remain ignorant of all others. The open method, or that of Syme and Simpson, is so well and fully set forth in Sir Joseph Lister's article in "Holmes's System of Surgery," written in 1861, that it appeared to me to be superfluous to describe it in the columns of a journal like THE LANCET; but since Surgeon-Major Lawrie has received numerous letters from Europe concerning it, and has gone to the pains of describing it, I suppose I am wrong in supposing that the A B C of the chloroformist's duties are pretty generally understood.

With regard to the second method to which I alluded, that in which Junker's inhaler is employed, I must say that your correspondent is clearly wholly unacquainted with the method, or he would not have permitted himself to indulge in such playful criticism. His humour loses none of its point when read by a person who is familiar with Junker's apparatus. I may just say that, with average intelligence and common-sense, the inhaler can be used without necessitating Surgeon-Major Lawrie's suggestion being carried into effect, and the patient

compelled "to do it himself." Further, the argument which he adduces — viz., that because I had seen various degrees of heart failure and circulatory trouble, therefore my methods are erroneous—is an instance of what logicians call a *petitio principii*, and proves too much. In the first place, the open method, to which my remarks mainly referred, is precisely the method which the Hyderabad Commission, following Syme, advocates. I, as well as many others in Europe, learnt the method before the session of the Commission. That Surgeon-Major Lawrie has never seen the heart fail and that I have is not surprising, because he has never felt the pulse or examined the action of the heart during chloroformisation, and I have. That Surgeon-Major Lawrie has had many cases I do not for a moment doubt, only he has overlooked them, and as, fortunately, in most cases respiratory rhythm is affected *pari passu* with cardiac enfeeblement, he has seen the danger-signal *quâ* the respiration, and has taken measures accordingly.

I am further stated to give no fixed principle of chloroform administration, and in my paper, to which reference has been made, I admit such is the case, and for the reason above stated, that my object was argumentative rather than didactic. In my lectures and practical demonstrations I believe I am dogmatic enough, but personally I regard dogmatism in discussions upon scientific subjects in a scientific periodical as unseemly and valueless. In conclusion, may I draw attention to a sentence against which I am bound to enter a protest? It runs: "The Hyderabad Commission has proved that there is no such thing as chloroform syncope, and that in death from an overdose of chloroform the respiration always fails before the circulation." I submit the Hyderabad Commission has done nothing of the kind; its conclusions were based upon purely negative evidence, and were not warranted by the facts before the profession, and I am strongly of opinion that any teaching which tells chloroformists to ignore the pulse is fraught with danger. I am greatly obliged to Surgeon-Major Lawrie for his courteous reference to myself, and can assure him that I constantly employ the open method and obey the rules he, following Syme, advocates; but I also watch the pulse.—I am, Sirs, your obedient servant,

DUDLEY W. BUXTON.

Mortimer-street, Cavendish-square, W.

INFLUENZA COMMUNICATED TO CATS AND HUMAN BEINGS BY HORSES.

To the Editors of THE LANCET.

SIRS,—At Cairndow, Loch Fyne, on Dec. 24th, 1889, two yearling colts in Mr. J——'s stables were seized with "strangles," or what was believed to be that disease. On Jan. 2nd, 1890, two horses, aged respectively five and six years, were seized with influenza; the symptoms were as follows: short cough, profuse nasal discharge, nauseous breath, marked stiffness of joints, disinclination for food or drink; no lung complications; duration of illness about three weeks. I had not the opportunity of seeing these horses, but got the above facts from the owner, a gentleman skilled in the treatment of horses. I had, however, the opportunity of seeing and treating a horse infected in Mr. J——'s stables; this horse was in the infected stables for four hours on Jan. 17th, 1890, and was not in any other infected stables or near any other infected animal. The incubation period was six days and the period of illness sixteen days. This horse suffered from the following symptoms while under my treatment: short cough, with nasal discharge, at first watery and latterly thick, with a yellowish tint and offensive smell; no glandular swelling of the throat or jaws; he had a weak appearance, staring dry coat, drooping head, dull, sunken eyes, and suffered from loss of appetite, difficulty in urinating, and constipation. For a few days this horse had not lain down in his stall at night. The stethoscope revealed no lung complications. Temperature per rectum 102°; pulse 60 per minute. Mr. J——, the owner of the horses at Cairndow, had three young cats which frequented a hay loft over the stables where the horses were kept while suffering from influenza. These cats were often seen in the stables or about the stables where the horses fed. They were soon seized with sneezing, cough, discharge from eyes and nose, were disinclined to take solid or liquid nourishment, and suffered from severe purging. One died, the others recovered.

From Jan. 9th, 1890, to Feb. 10th, a dancing class was taught in the hay loft above the stables. This loft was low in the roof, with deficient ventilation, and the infected stables below were in a most insanitary condition. There was direct communication between the mangers out of which the affected horses fed and the hay loft through which a current of air passed into the loft and contaminated the atmosphere. There were forty pupils at this school, mostly the children of shepherds isolated from each other over an area of about four or five miles from the hay loft where this class was held. There are only about a dozen families in the district, and owing to their pursuits in life and primitive habits they have little communication with the outside world. There was no case of influenza in the district or anywhere near it as far as I know before Jan. 1st, 1890. On that date a person, who was in continual contact with the horses, was seized with the disease. On Feb. 2nd his son and a neighbouring lad were attacked with influenza, complicated with pleuro-pneumonia. The son described his symptoms as follows. General malaise for about a week, great depression, sickness and nausea, foul breath, hot and dry skin, alternately with cold sweats, severe pain in loins, frontal headache, deep-seated pain behind the eyeballs, followed by cough and prune-juice expectoration. All these cases were convalescent before I had the opportunity of seeing them, and cannot describe the symptoms more minutely. All the forty pupils in the dancing class suffered from well-marked influenza except seven. Some had the disease in a mild form, others had the gastro-intestinal type of this disease, one had severe otitis, with foul discharge from the ears. An occasional onlooker at the dancing class, a young lad, took ill on Feb. 7th, and his father the following day, both died on the 15th of the same month. They were ailing more or less for a week before being confined to bed. These were the only two fatal cases. At Lochgoilhead, about nine miles from Cairndow, there were five or six mild sporadic cases after the epidemic at Cairndow, but there were no other cases to my knowledge within ten miles of Cairndow. I think it fair to infer that a type of this disease was communicated from the horses to the cats and all the persons who suffered from it.—I am, Sirs, yours truly,

J. H. CAIRD,
Medical Officer of Health.

Lochgoilhead, March 16th, 1891.

ERYSIPELAS AND TOTAL ABSTAINERS.

To the Editors of THE LANCET.

SIRS,—I should be sorry if any of your readers should, by my silence, imagine that I admit the truth of Mr. Whitehead's Parthian shot. I can afford to be amused at his reference to my supposed want of knowledge on the subject of alcohol. Mr. Whitehead is mistaken as to Dr. Parkes' dictum with regard to the quantity of alcohol which an adult man might possibly take. It was the late Dr. Anstie who, at one time, put the limit at two ounces (not "about two ounces," Mr. Whitehead). Dr. Parkes put the limit as between an ounce and an ounce and a half in the twenty-four hours, the maximum amount for a powerful man accustomed to the use of alcohol. And what he said about this was that this amount was not followed by any immediate and obvious deleterious effects. I think it can be shown that Dr. Parkes was mistaken on this point; but even if he were not, it by no means follows that such a dose could be taken day after day, month after month, and year after year with similar freedom from obviously bad consequences. As a matter of fact, the returns of some insurance companies show that in the long run these constantly repeated small doses of alcohol cause earlier average death by five or six years than would otherwise have been the case. But more accurate tests than Dr. Parkes applied have shown that all the senses are rendered less acute than before by moderate doses of alcohol, and that perception, discrimination, and decision are all rendered slower. As Dr. Lauder Brunton has said, it produces progressive paralysis of the judgment, and, I may add, of the will likewise. Mr. Whitehead says he is unaware that alcohol in small doses, well diluted, lowers the temperature in health, and says there is evidence to the contrary. Some observers have noted a very small temporary rise of half a degree or so, followed by a fall; others deny any alteration, especially in those accustomed to it. I have noted in myself, an abstainer, a fall of from half to one degree F. some time after two drachms of alcohol well diluted. It is

an experiment which anyone can make, taking ordinary care to avoid fallacies. These and many other considerations show that alcohol lowers vital actiop, though it may apparently stimulate indirectly through relaxation of bloodvessels. We come back to the point that in such a condition the body is less fortified against the attacks of erysipelas or any other disease. The returns of the London Grand Division of the Sons of Temperance for 1890, notwithstanding the influenza epidemic, show an average sickness of seven days per member. The most temperate users of alcohol cannot beat that. I trust that Mr. Whitehead will further investigate the subject, and see what the standard works on alcohol really say.

I am, Sirs, yours truly,

J. J. RIDGE,

Enfield, March 16th, 1891. Hon. Sec., Brit. Med. Temp. Assoc.

*** The correspondence on this subject must now cease.—ED. L.

ARREST IN GENERAL PARALYSIS.

To the Editors of THE LANCET.

SIRS,—Recently there have been under my observation three successive cases of general paralysis, in each of which "arrest" has taken place; all were strong men and in the prime of life. The symptoms were unmistakable; indeed, they were typical of the disease. I need hardly give them in detail, they are well known. The first patient believed himself King of Heaven and Earth, and made princes and dukes of those around him; he made millions of money daily, and invited the Prince of Wales and the Duke of Cambridge to dine with him. The second was violent, fought and resisted at first; he made two hundred thousand pounds a day, and offered to make the fortune of all indiscriminately at once; he squandered his money and wrote cheques recklessly. The third was maniacal; he shouted incessantly and was violent, he had thrown knives about, he was King of the World, he had inherited millions under successive wills, and spent most of his time, from his lofty elevation, in watching and controlling the revolutions of the earth.

In each of these cases there were pin-point, unequal, or irregular pupils, the usual great excitement of the first stage, the filthy habits, the restlessness, the sleeplessness, the loss of flesh, the tremulous movements of lips and tongue, and the defective and drawling articulation. They each went through a longer or shorter first stage, and, finally, each in turn gradually lost the excitement, the exaltation, the delusions, the filthy habits, the restlessness, the sleeplessness, and made flesh. Coherence returned perfectly in the first two cases, the third is gradually regaining it. The mental powers, considering the strain they had gone through, were wonderfully little impaired. Each became able to transact business, to settle, manage, and put in order his own affairs. It is not improbable—indeed, it is likely—that each of these cases will again break down physically, and lose mind, but my object in seeking to draw attention to such cases is to show that it may prove of immense advantage to a patient suddenly struck down with so formidable a disease as general paralysis to practically recover, although the recovery may be only temporary, and thus have time given him to put his house in order. That such remission, arrest, or temporary recovery from the disease as I have here described may be favoured by early treatment and careful conduct of the patient through the first stage my later experience of general paralysis leads me strongly to believe.—I am, Sirs, your obedient servant,

JAMES ADAM, M.D.

West Malling, Kent, March 14th, 1891.

ST. BOTOLPH'S CHURCH, ALDGATE.

To the Editors of THE LANCET.

SIRS,—As upper warden of the church of St. Botolph, Aldgate, I cannot allow to pass without comment the condemnatory remarks you have thought fit to make upon the conduct of those concerned in the removal of the bones in the churchyard surrounding this church. The original order was varied because it was found that, in order to construct a vault as originally ordered to receive the displaced bones, other bones, probably in equal quantity, would have to be displaced. During the erection of a new heating apparatus three months ago numerous vaults containing remains were found in the floor of the crypt, and it was decided that this should be leveled and concreted. Before this could be accomplished the difficulty occurred with regard to the disposal of the bones found in the churchyard. Dr. Tristram came down and carefully inspected the premises, and ordered that the bones should be deposited in the crypt. This order has been reverently and decently carried out. The bones so collected have been sprinkled with lime and put in boxes, and each box has been covered with an inch of vegetable charcoal before being fastened down, and this has been done, not because there has been the least perceptible effluvium, but simply as a matter of precaution. The leaden coffins are placed each in a separate box in the crypt under the tower of the church, and there walled in and cemented. The bones are all dry and clean; there has not been at any time during the progress of the work any odour detected. You probably are not aware that no law exists which would permit the removal of the bones as you suggest. In order to obtain such removal nothing short of a special Act of Parliament would have been required. I think it desirable that before making public comment on such an undertaking you should make yourself personally acquainted with the circumstances. I shall be happy to show you or your representative over the church and crypt at any time by appointment. Meanwhile I shall be glad if you will cause the insertion of this letter in THE LANCET of this week.

I am, Sirs, yours faithfully,

JNO. COTMAN, M.R.C.P. EDIN., &c.

Minories, City, March 23rd, 1891.

A NOZZLE FOR NASAL DOUCHE.

To the Editors of THE LANCET.

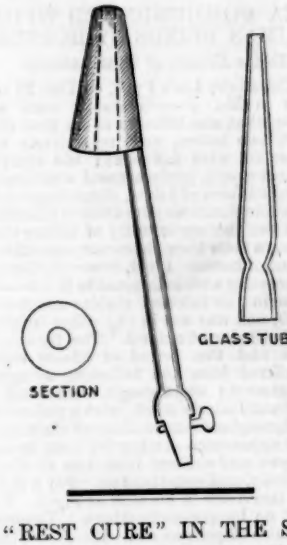
SIRS,—Having had some difficulty in arranging a nasal douche for a lady, I had a nozzle made for me, which I think presents some advantages. It consists of a hollow indiarubber nose piece, which can be blown out just so as to be comfortable to the nostril. It has a central tube, into which a glass tube (connected with a syphon douche) fits. By its softness and its accurate adaptability to the nostril, it prevents escape of any lotion used, and at the same time gives the patient no discomfort.

I am, Sirs, yours obediently,

RUSSELL COOMBE, M.A., F.R.C.S.

West Southernhay, Exeter.

P.S.—It was manufactured by Messrs. C. Wright & Co., of New Bond-street.



THE "REST CURE" IN THE SAHARA.

(FROM A HOLIDAY CORRESPONDENT.)

THIS islet, or rather group of islets, in the great sand sea has all the makings of an admirable health resort, particularly for the sufferer from brain fag or the convalescent from neurasthenia. Its stillness, its estrangement from "the fever and the fret" of the populous European centres, its pure exhilarating atmosphere, its varied

inducements to open-air life, are all in the invalid's favour, while its natural and historical interest is sufficient to keep the intellect in gentle activity, to say nothing of the moral fascination it owes to the work of Cardinal Lavigerie, that exemplary pioneer in the cause of negro disenthraldom and enlightenment.

For six months of the year the climate of Biskra is all that can be desired. Its salubrity and general attractiveness were familiar to imperial Rome, which made it one of the outposts of the Third Legion, which was quartered in the province. Ad Piscinam was the name it then bore, whence, by phonetic decay, we get "Biskra." Its mean temperature on an average of ten years is 73° F., the maximum during the same period being 124° (in summer) and the minimum 36° (in winter). Rain seldom or never falls, and its only objectionable feature is the occasional prevalence of high winds more or less charged with sand.

Its water-supply from the Oued Biskra ("Oued" corresponding to the "Wady" of Upper Egypt, and meaning river or river valley) is abundant in winter and spring, and never fails except in phenomenally dry summers. Even in such droughts the boring of artesian wells has made the inhabitants independent of the Oued, the enterprise of the French having provided it, as well as the oases in the Sahara, with such means of maintaining water enough for drinking as well as for agricultural requirements. Thanks to this addition to its resources the vegetation of the town and neighbourhood is wonderfully fresh and luxuriant, furnishing not only pleasant shade in the public garden, but affording in the private retreat of M. Landon an assortment of successfully acclimatised trees, tropical and subtropical, which form a source of perennial delight to the public, to whom they are made liberally accessible.

Again, the sulphur baths (with a temperature of about 112° F.) are another resource of Biskra not to be overlooked by the visitor. Rising in the Djebel-bon-Ghazal, a low limestone range about six kilometres from the town, they burst forth in great volume to the amount of forty litres a second, and have been greatly utilised by the officers of the French garrison, as they doubtless were by the Romans of the Empire. Unlike their Imperial predecessors, however, the French have done but little to make their virtues enjoyable by the general population. Where Rome, as the remains of ruined structure testify, must have had a thermal establishment on the system, if not to the extent, of those yet visible at Pompeii and other provincial towns, France has only produced an assortment of cabins, but one of which—that reserved for the officers—is fit for decent use. True, there is a talk of extending the accommodation at these baths, and there is even a project of carrying the water by pipes into Biskra itself. But as this latter enterprise is to be associated with the construction of a casino and the establishment of a gambling table on the model of Monte Carlo, its realisation seems fraught with very doubtful advantage to the hitherto tranquil and unspoiled health resort in the Sahara. Whatever "business" of the fashionable kind it would bring to Biskra, it would be fatal to the chief attraction the place now possesses as a seat of the "rest cure."

While the natural recommendations of Biskra are so pronounced, and, in some respects, so unique, there are drawbacks connected with it which have made the former accessible to comparatively few. The Algerian railways are a discredit to French civilisation. Their rate of travel is so slow—top speed barely fifteen miles an hour—that to get from one considerable town in the colony to another the passenger has to start at an hour far too early for all but the robust. The conveniences of the railway service are, moreover, quite inadequate to modern requirements. No means of retirement in the railway carriages such as the traveller on the English or European lines is universally accustomed to; no foot-warmers, even in the dead of winter, except on one or two favoured routes; no intermediate stations where the passenger can, if necessary, spend the night with safety to health or without offence to decency; no buffet or restaurant where food fit to eat may be counted on; and (most objectionable feature of all) no *lieu d'aisance* which the average Briton, *a fortiori* the delicate lady, can enter or even approach. Out of Algiers it is difficult to find a hotel where cleanliness and comfort are provided for on a civilised scale; indeed, but for Swiss enterprise and management, Biskra itself would be quite inferior, in point of hotel accommodation and appointments, to a second-rate Italian town. Improvements in this direction, and not in that of multiplying casinos and gambling-tables, are what is needed for the development of Algeria as a health resort. After sixty years' occupation of the colony—a colony, moreover, little more than a day and night's voyage from her Mediterranean ports—France has done marvellously little for the introduction of civilised institutions. The "rest cure" is an excellent addition to therapeutics, for which Southern Algeria is admirably well adapted. It is a pity that those in high office should have practised it in their own case, and made their posts little better than the dormitories of officialism.

Biskra, March 13th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Prudhoe Memorial Convalescent Home.

AT the late meeting of the Convalescent Society of Newcastle, held in the library of the Royal Infirmary, Dr. Philipson read the report, which was the thirty-first of the Society's existence; but the Prudhoe Memorial Home at Whitley was only opened in September, 1869, and, as will be shown from the report, has done an immense amount of good work since. The number admitted during the twelve months ending Dec. 31st last has been 1513. This number is thirty-six less than that of 1889, but the year 1889 was exceptional as compared with all preceding ones. The total number of patients received since the institution was opened has been 21,722. Dr. Bramwell read the medical report, which stated of those cases treated during the year 1094 were cured, 378 were greatly benefited, 39 were *in statu quo*, and 2 died.

The Health of Middlesbrough and Stockton.

The medical officer of health for Middlesbrough (Dr. Malcomson) reports that the death-rate had greatly improved, having fallen from 33 in January to 22 in February, which was owing to the favourable weather and the diminution of fatal cases of typhoid fever. At Stockton, too, it appears that typhoid fever is decreasing, but there was still some continuance of scarlet fever.

Ambulance Work in the North.

An examination of members instructed under the rules of the St. John Ambulance Association was held at North Ormesby last week, the men being from the large works in the neighbourhood. Surgeon-Major Hutton was the examiner, and he said the examination reflected great credit on Mr. Smith of North Ormesby, the instructor of the class. Upwards of 5000 persons have passed the Association examinations, which numerically is now the largest district engaged in this work, with the exception of London; at Darlington, too, classes have been examined, and Mr. Jackson has been complimented for their proficiency, likewise Drs. Smeddle and Fielden at Shildon; the last has received a presentation from his class. Dr. Lambie of Lowick has received a presentation of a handsome stationery cabinet, together with a purse of sixty-seven sovereigns, in grateful recognition of his valuable services as medical adviser and the lively interest he has taken during his residence of twenty years in the village in the well-being of the neighbourhood.

Hexham.

Dr. D. Jackson, the medical officer of health for Hexham, in his annual report says that the death-rate, 15·52 per 1000, was the lowest it had ever been his privilege to record. The year's working of the notification of diseases had been satisfactory. He is strongly against having a hospital conjointly with other authorities for infectious diseases, as the chief attraction of Hexham, and a future source of its prosperity, would be its public health, and to concentrate the infectious diseases of a wide area in their midst would, in his judgment, be most detrimental to the best interests of the district.

Recovery of Sulphur from a Waste Product on the Tyne.

The *Newcastle Chronicle*, referring to the opening of works on a large scale some time ago for the manufacture of sulphur by Chance's process, notes that it has been a complete success; that so large a market has been found for the sulphur recovered from the "tank waste" in the alkali manu-

facture that the article commands a price 50 per cent. above that formerly realised. But there is another advantage in the utilisation of this tank waste—namely, the removal of a nuisance which was at once unsightly and offensive. If the carbon and sulphurous acid which are so freely suspended in our Tyne atmosphere could be recovered in some similar way it would be indeed a blessing. For this, I suppose, we must wait until it can be shown to be a commercial success.

Newcastle-upon-Tyne, March 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Public Health Committee.

AT the meeting of the Public Health Committee last week it was reported that the total number of deaths registered in the city during February was 396, making the death-rate 17·25 per 1000, as compared with 490 in the corresponding month of last year, and 367 in 1889. The rate was below the average of the preceding five years by a fraction of a unit per 1000. As regards age, 29·29 per cent. were under five years, 12·12 per cent. between five and twenty-five years, 29·79 per cent. between twenty-five and sixty years, and 28·78 above sixty years. As regards the causes of death, diseases of the chest accounted for 35·85 per cent., debility and old age for 12·12 per cent., zymotic diseases for 10·10 per cent. During the month 393 cases of infectious disease were intimated, compared with 1037 in the corresponding month of last year, 161 in February, 1889. Of these, 165 were cases of scarlatina, 107 of measles, 94 of typhoid fever, and 27 of diphtheria. Into the City Hospital 139 patients had been admitted, 23 discharged, and 10 died. At the end of the month there remained 262 patients in the hospital, 129 being cases of scarlatina and 82 of typhoid fever. The birth-rate for the city was at the rate of 24·04 per 1000; the males numbered 290 and the females 262. During the month 29,714 lb. of unsound meat were seized or delivered. There were 16 cases of tuberculosis, in 10 of which the animals were destroyed by order of the Board of Agriculture.

Royal Physical Society.

At the meeting of this Society last week Dr. G. Carrington Purvis read a paper on the biological examination of water and milk, with special reference to typhoid fever, and another on the pineal eye of the porbeagle shark.

Health of Edinburgh.

The mortality last week was 114, making the death-rate 22 per 1000. Diseases of the chest caused 60 deaths, and zymotic diseases 7, of which 5 were due to whooping-cough. The intimations for the week were—typhoid fever, 4; diphtheria, 5; scarlatina, 15; measles, 88.

Hospital for Sick Children, Aberdeen.

During the past year 484 patients were treated in the hospital, of whom 387 had been resident in Aberdeen, and 97 came from the country. The expenditure amounted to £1717 8*s.*, while the income, including a balance of £23 4*s.* 4*d.* brought forward from the previous year, amounted to only £1637 0*s.* 5*d.*, showing a deficit of £80 7*s.* 7*d.* During the year £730 17*s.* 9*d.* had been received on capital account, consisting of legacies and special donations, which had been applied towards clearing off the hospital debt, which has now been reduced to £1670 5*s.* 7*d.*

Factories and Workshops Bill.

The Senatus Academicus of the University of Glasgow have forwarded to Mr. James A. Campbell, M.P., for presentation to Parliament, a petition with reference to the above Bill, setting forth that the certificate of fitness for employment of children and young persons in factories and workshops is a valuable safeguard, that the requirement of it is in accordance with other legislative enactments for the protection of the young, and that its abolition (as proposed by the nineteenth clause in the present Bill) would be a retrograde step.

A resolution has also been adopted by the Medical Faculty of Aberdeen University viewing with apprehension the proposal to abolish the certificate at present required of fitness for the employment of children and young persons in factories and workshops.

March 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

DUBLIN.

The late Mr. R. G. H. Butcher.

THE late Mr. Butcher [a notice of whose life and work appears in another column] was a brother of the late Bishop of Meath, and as a memorial to him and his father, Admiral Butcher, he at his sole cost fitted up a lifeboat station on the west coast of Ireland, at a large expenditure, the boat alone costing £1000. During his last illness he was attended by an old pupil, Mr. W. J. Wheeler.

Health of Dublin during 1890.

In the Dublin registration district the births registered last year numbered 9629, being equal to 27 per 1000, and the deaths 9454, or 26·8 per 1000, or, allowing for the intercalary week, to 26·3, being 0·7 over the rate for 1889. Deaths from zymotic diseases were 1019, or 418 below the average for the previous ten years. Of these, measles caused 106 deaths; scarlatina, 8. There were 25 deaths from typhus, 185 from enteric fever, and 9 from simple continued fever. Whooping-cough caused 187 deaths; diarrhœa and dysentery 184; while influenza, which prevailed in the early part of the year, caused 78 deaths, of which 61 occurred in the first quarter from pulmonary and other complications. The mortality among children was considerably below the average, the death-rate under five years being 69·6 per 1000 of the estimated number of the living at that age, against an average of 88·1 for the previous ten years. The deaths of infants under one year were equal to 163 per 1000 births registered; in 1889 the infant mortality rate was 180.

Monkstown Hospital.

During the past year important and extensive improvements have been made, and at present the institution is in a thoroughly efficient condition. It is satisfactory to learn that the new wing, comprising two wards, a nurses' room, and kitchen, has been furnished and equipped without trenching upon the funds of the hospital. There is, however, a balance due on the building account of about £300, and a debt of about £100 on the ordinary maintenance of the hospital; but as every item which may be regarded as permanent income increased last year, the outlook for the future is encouraging.

Poisoning by Paraldehyde.

In August last a patient in the Cork Workhouse died from an overdose of paraldehyde administered to her by the nurse, Miss Catherine Horgan, particulars of which have already been fully reported in these columns. At the Cork Spring Assizes last week the grand jury found a true bill for manslaughter against Horgan.

A Centenarian.

A lady named Sullivan died in the Kanturk district, co. Cork, last week, aged 109 years. Her sister died about twelve months since, also at a very advanced age—viz., 106.

Queen's College, Cork.

The following lecturers have been appointed by the Council:—Oscar Woods, M.D., L.R.C.S.I., to be lecturer in Psychological Medicine; J. Cotter, M.D., M.Ch., to be lecturer in Pathology; Arthur W. Sandford, M.D., M.Ch., to be lecturer in Ophthalmology and Otology; and Denis D. Donovan, L.R.C.P. and S. Edin., to be lecturer in Hygiene.

A grand ball, under influential patronage, will take place at the Assembly Rooms, Cork, on April 10th, in aid of the Nile-street Hospital.

BELFAST.

Queen's College, Belfast.—The Graduates' Réunion.

One of the most interesting events in the history of Queen's College, Belfast, took place on Thursday evening, March 19th, when the old graduates assembled at a banquet in the Great Hall of the College. There was a very large attendance. The President (Dr. Hamilton) occupied the chair, having on his right Lord Justice Fitzgibbon and on his left Mr. Justice Gibson. The Mayor (Mr. Connor, M.A.), an old Belfast student, Lord Bangor, the Moderator of the General Assembly, the President of

the Harbour Commissioners, the City Recorder, Rev. A. H. Pakenham, the President of the North of Ireland Branch of the British Medical Association (Dr. W. A. Keown), the President of the Ulster Medical Society (Dr. Dempsey), the professors of the College, and a large number of the leading representatives of the clerical, medical, legal, and scholastic professions in the north of Ireland were present. After the usual loyal toasts had been proposed the President gave "The Health of the Judges," which was responded to by Lord Justice Fitzgibbon and Mr. Justice Gibson. The toast of the evening was then proposed by Lord Justice Fitzgibbon—"Floreat Collegium Reginale Belfastiense," to which the President replied, and in a very happy way pointed out the distinguished positions that old graduates of Queen's College, Belfast, now occupied in all parts of the world. He gave the following interesting statistics. The College has now been in operation for four complete decades. In the first of these the average number of students each year was 189; in the second this figure was nearly doubled, rising to 368; in the third it rose to 400; in the fourth, the last which has been completed, it mounted to 473. Professor Redfern, M.D., then proposed the toast, "The Benefactors of the College," to which the Rev. A. H. Pakenham replied. "The City and Trade of Belfast" was given by Mr. Shaw, Q.C., and the Mayor, the President of the Harbour Commissioners, and the President of the Chamber of Commerce replied. The Moderator of the General Assembly (Rev. W. Park, M.A.) proposed in very felicitous and complimentary terms, "The Medical Schools of Ireland," to which Professor Cuming, M.D., responded. Mr. Dodd, Q.C., gave "The Press," to which Mr. Henderson, M.A., and Mr. M'Knight replied. Professor Purser, D.Sc., proposed "Long Life and Happiness to our President and Mrs. Hamilton," which was received with great enthusiasm. The President having replied, the proceedings terminated shortly after midnight. In addition to the band of the Rifle Brigade, the following gentlemen contributed an excellent programme of vocal music, under the direction of Dr. J. A. Lindsay: Dr. MacKenzie, Dr. Leslie, Dr. McCaw, Dr. M'Kissack, and Mr. W. N. Watts, B.L., LL.D. The *réunion* was a very great success, and the proceedings throughout were most interesting and enthusiastic. The President has won golden opinions by the admirable tact, good sense, and sound judgment which he displayed throughout the proceedings of the evening.

March 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

The New Law Regulating the Practice of Medicine in France.

THE great event of the week here is the passing by the Chamber of Deputies, on the first reading, of this much-talked-of Bill. Having been declared *d'urgence*, a second reading of the Bill is unnecessary, and it passes at once, after the Easter recess, to the Senate, where it is unlikely that its clauses will undergo material modification. The Bill derives its claims to importance principally from the clauses affecting indigenous and foreign doctors and dentists, and also from the fact that it renders compulsory the notification of certain infectious diseases (the list to be made out by the Minister of the Interior after consultation with the Académie de Médecine and the Comité Consultatif d'Hygiène Publique), and the participation of medical practitioners in medico-legal inquiries, whenever a requisition to that effect is made by the authorities. With regard to the compulsory notification of infectious diseases, it seems to me that its working will be difficult, seeing that the words "*et n'engageant pas le secret professionnel*," qualifying the words *maladies épidémiques*, leave apparently a considerable loophole for its non-observance. The clause providing for the compulsory participation of doctors in medico-legal investigations is doubtless meant as a reply to the strike of the profession, the members of which naturally object to give and prepare evidence in such cases for the miserable pittance now offered to them. The present Bill is designed to revise the *régime* under which, since the year 11 of the first Republic, followers of the healing art have existed. As long ago as 1883, Dr. Chevaudier, a medical deputy, laid on the table of the Chamber a similar Bill, but it is curious that the measure just passed by the Lower House should be almost identical with one that was voted by the Chamber of Peers in 1847. The *officier de santé* dates from the year 11 above-mentioned. In no other European State, excepting Portugal, does there exist a similar inferior grade of practitioners. In France, he differs from the M.D. in that (1) he has never passed his *baccalauréate ès Sciences et ès Lettres* (in student slang, *bacho*); (2) he is forbidden to perform major surgical and obstetrical operations; (3) he does not enjoy the prestige of his hierarchical superior, the M.D. The new law provides for the extinction of this second-class practitioner, while reserving to existing *officiers de santé* their right to practise under the same restrictions, and allowing such of them as desire to do so to graduate as M.D., under conditions to be hereafter determined by the Conseil Supérieur de l'Instruction Publique. In future, no one will be allowed to practise medicine on French territory who is unprovided with the diploma of Doctor of Medicine delivered by the French Government. Foreigners desirous of practising in France will have to pass the examinations (and write the thesis) qualifying for the degree at whichever faculty they may choose; but if they can produce the pass certificate of a preliminary examination undergone in their own country, and deemed by the French Minister of Public Instruction of sufficient value as a matriculation test, they will be excused the *baccalauréate*. The Minister shall also have the power to excuse the foreign aspirant not more than three professional examination tests (*trois épreuves*). A novel feature of the Bill is the recognition of the legal status of the dentist. While at present anybody may practise that art, in future no person unprovided with the diploma of M.D. or that of *officier de santé*, or with the licence (*brevet*) of dentist delivered by the French Government, may do so. It was originally proposed to create a diploma in Dentistry, but an amendment was carried declaring a simple licence sufficient. The nature of the examinations qualifying for the *brevet de dentiste* will be hereafter determined by the Conseil Supérieur de l'Instruction Publique. Vested interests are respected as in the case of *officiers de santé*. Any native or foreign dentist who, by the production of his *patente* (nearly all callings pay a *patente* in France), can prove having practised in France for one year previously to the promulgation of the new law will be allowed to ply his art unmolested. But an important distinction is made between him and the licensed dentist of the future, in that the latter alone may, without the collaboration of an M.D., administer anæsthetics, both general and local, the presence of a doctor being compulsory in the case of the unlicensed dental practitioner of the *ancien régime*. Doctors of medicine, *officiers de santé*, dentists, and *sages-femmes* must register their diplomas and *brevets* within one month of their having made a choice of a domicile for business purposes. *Sages-femmes* (midwives) have their actual privileges, including that of vaccinating and revaccinating, confirmed, and will be, as at present, of the first and second class, according to the examinations passed qualifying for the diploma delivered by the French Government, which diploma alone confers the right to practise midwifery (M.D.'s and *officiers de santé* have, of course, that right). *Sages-femmes* are forbidden to employ instruments or to administer drugs, certain rare exceptions being made as regards the latter. No doctor, dentist, or *sage-femme* may act as a pharmacist, even though he or she possesses the latter title. The right of doctors to dispense their own prescriptions in certain districts deprived of a pharmacy has still to be taken into consideration, and the question is deferred until the Pharmacy Act is discussed. A person who employs as a prefix or an affix to his name the title of doctor in medicine without indicating the source of the degree is considered guilty of usurping the title of a French doctor in medicine, unless the said title emanate from the French Government. Various penalties for the illegal practice of medicine, dentistry, and midwifery are specified in the law, and the said penalties are increased if to illicit practice be superadded the offence of usurping titles. Doctors, *officiers de santé*, dentists, or *sages-femmes*, who cover with their names irregular practice by unqualified persons, may be prosecuted themselves for illegal practice. The above clauses comprise all that can interest your readers. The law modifies considerably the position of any of our compatriots who may wish to settle in France with a view of practising. There are, I believe, several English doctors established in France

who practise in virtue of a special permission, without having qualified even as an *officier de santé*. The Bill is less favourable to them than to dentists already established, and I take it that they will either have to cease practice or graduate at a French Faculty. A deliberate attempt was made by three Boulangist deputies, one of whom was M. Déroulède, to exclude foreigners entirely, and to make French nationality a *sine quâ non* for doctors and dentists. Happily the good sense of the majority soon disposed of this piece of Chauvinism. Throughout the entire discussion Professor Brouardel, Dean of the Paris Faculty, acted in the capacity of Commissary for the Government.

Fluoride of Sodium as a Remedy for Tuberculosis.

Having observed the similarity of the beneficial effects in tuberculosis of dog and goat serum and fluoride of sodium, M. Bourgeois was led to analyse the serum of the blood of these animals, which, as is well known, are refractory to the disease in question. M. Bourgeois has, he informs us (Société de Thérapeutique, March 11th), succeeded in engraving letters on glass by means of the blood of the dog and goat; and he believes that, employed as a therapeutic agent, it is the fluoride of sodium, which he designates the natural preventive of tuberculosis, which endows the vital fluid of these animals with its antibacillary powers. M. Bourgeois was led to give the fluoride a trial in consequence of the happy results obtained by inhalations of hydrofluoric acid. The results were good in the pulmonary, intestinal, and osseous forms of tuberculosis, the patients gaining in weight, and the sweats disappearing.

Paris, March 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Dr. von Gossler.

DR. VON GOSSLER'S resignation of his post as Prussian Minister of Religion, Education, and Medical Affairs affords a fit opportunity for drawing attention to the important services rendered by him to medical science. One of the most memorable of these was his speech on vivisection in 1883. Another was his energetic defence of vaccination against repeated Parliamentary attacks. He was also a most liberal promoter of the new sciences of hygiene and bacteriology, and the enthusiasm with which he welcomed and promoted Koch's last discovery is still in lively remembrance. The success of the Berlin Congress of Naturalists and Physicians in 1886 and of the tenth International Medical Congress last August was largely due to him, and it was in recognition of the latter of these services that the Berlin Medical Society created him "honorary member." He was the founder of the "Klinische Jahrbuch" (Clinical Annual), in which the heads of the university clinics have to render annual account of their stewardship, and to discuss medical questions of general importance.

Professor Koch.

The following telegram was sent from Cairo on the 16th instant: "Professor Dr. Robert Koch, who arrived here yesterday, has expressed his opinion in favour of the erection of a barrack hospital for pulmonary patients in Thebes, as he considers the climate there especially favourable."

The Thirteenth Annual Congress of the Balneological Society.

The proceedings of the thirteenth congress of the Balneological Society began with the inspection of the new Berlin Hospital am Urban in the forenoon of the 6th instant. The first meeting took place in the evening of that day in the lecture-hall of the Pharmacological Institute, and was opened by the president, Professor Liebreich. The next speaker was Dr. Roempler of Goerbersdorf, who spoke on the prophylaxis of consumption. He did not agree with those who thought the destruction of tubercle bacilli the one thing needful in the battle with consumption, because it was, in his opinion, impossible to exterminate the bacilli. Care must rather be taken that they should find no good nutritive medium in the body. The best way was to increase the resisting power of the predisposed organs. Good nutrition and plenty of fresh air were the main means to this end. Even in the case of intelligent and well-to-do people it was difficult to carry out the precautions for the destruction of the bacilli. If, on the other hand, one considered the extraordinary decrease in the consumption death-rate in English cities in consequence of hygienic institutions on a grand scale, there could be no doubt that hygienic prevention was the only way to obtain really tangible results. Koch himself had said that the inheritance of consumption was due to the inheritance not of the bacilli, but of the predisposition. Dr. Roempler gave instructive statistical proofs of his opinion. As to the promotion of consumption by cold, light had also begun to be thrown on this, as it had been observed that fission fungi increased much more rapidly in the blood of living rabbits in the refrigerator than under ordinary conditions of temperature. Thanks to fresh air and the vigorous circulation caused by their work, rural labourers seldom fell victims to consumption, whereas young gentlemen learning agriculture, whose food and sleep were often scanty, and who had to superintend the work in all weathers without working themselves, very often did. The once prevalent opinion that there was a consumptionless zone, dependent on height above the level of the sea, had long yielded to the truer view that the consumptionless zone began everywhere for everybody with the conditions of life which secured him a sufficient quantity of normal blood and vigorous circulation. Professor Winternitz of Vienna then spoke on the importance of hydro-therapeutics in clinics. He complained of the neglect of hydropathy in hospitals, in consequence of which it had become the chosen domain of quacks, who obtained as many indisputable successes by it as they did harm. He had gained excellent results himself by the hydropathic treatment of neuralgia, rheumatism, and consumption.—Dr. Groedel of Nauheim proposed that the Congress should take steps towards having the centigrade thermometer introduced everywhere in indicating the temperature of baths both in practice and in scientific work. This proposal was accepted.

The Treatment of Tuberculosis by Combined Methods.

A Bulgarian army doctor named Tranjen is making experiments in the Augusta Hospital here, with a view to curing tuberculosis by an original combination of the remedies hitherto known.

School Hygiene.

The School Board of the province of Brandenburg has ordered that the teachers and pupils of the schools under its care shall expectorate in the buildings exclusively into spittoons of proper construction or into bottles constructed on Dettweiler's system; that dust shall be removed from the rooms as completely as possible, but only by wet methods; that the teachers shall especially insist on the observance of the first of these orders by pupils who cough much; and that leave of absence with a view to treatment shall be granted with special readiness to pupils suffering from pulmonary disease. The head masters are to take care that the schools be sufficiently provided with suitable spittoons.

A Medical Exhibition.

There will be an exhibition of medical instruments and preparations in the new Medical Institute in the Johannis Strasse here in the beginning of April. Its purpose is to afford the members of the Surgeons' Congress and the hearers of the holiday courses of lectures for practitioners an opportunity of estimating the progress made here in the manufacture of instruments &c.

Professor Virchow.

A week or two ago Prof. Virchow measured some microcephalous Mexican aborigines on show here. He opposed the theory that such persons are to be regarded as specimens of transitional stages between the ape and man, and maintained that the forms in question are merely morbid, not atavistic.

Professor Rindfleisch.

Professor Edward Rindfleisch of Wurzburg has been elected a member of the Académie de Médecine in Paris. Except the recent bestowal of the Grand Cross of the Legion of Honour on Helmholtz, this is the first distinction of the kind bestowed on a German scientist by the French since 1870. There are only three other German members of the Académie—viz., Virchow, Bunsen, and Helmholtz. Rindfleisch is director of the Pathological Institute of the University of Wurzburg. In his scientific views he differs considerably from his teacher Virchow. His chief works are his Text-book of Pathological Histology and his Elements of Pathology.

Professor Renk, Director of the Hygienic Institute in the University of Halle, has been appointed extraordinary member of the Imperial Office of Health.

Berlin, March 22nd.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

McGill University.

THIS University has received from Mr. W. C. McDonald, Montreal, a further handsome donation of 40,000 dollars towards endowing a chair in electrical engineering. This gentleman's various gifts to McGill amount to nearly one million dollars.

Board of Health for Ontario.

The quarterly meeting of the Board was held in this city on Feb. 25th and 26th. An interesting discussion took place regarding the placing of actinomycosis among contagious diseases, a case having been reported where diseased animals were slaughtered and offered for sale, convictions having been obtained; but an appeal is pending, the defendant claiming that the meat was not offered for sale. The Board allowed the matter to stand pending the appeal. The important matter of the quality of ice cut by the leading railway companies for summer use for drinking purposes was shown to be one in which local boards had power to adopt such regulations as they deemed best to secure a pure ice. The Committee on Epidemics reported the correspondence between the Grand Trunk Railway with reference to the transportation of dead bodies. The committee had reiterated the views expressed by the Board in May, 1889, in a series of resolutions, the gist of which is that the practice of transporting the bodies of persons dead from dangerous communicable diseases be discontinued, owing to the impossibility of at all times preventing persons who may have received infection from contact with the corpse, or in any other way, from afterwards communicating the infection to others. Dr. P. H. Bryce, secretary to the Board, was appointed delegate to the annual meeting of the American State Medical Health Officers, to be held in Washington this month.

Toronto Medical Society.

At the meeting held on Feb. 19th, being a pathological evening, a number of interesting specimens were exhibited, among which was a Tumour of the Bladder and Uterus, accompanied by Ascites, in a seven months' fœtus, obstructing labour, by Dr. Gordon, and Dermoid Cyst of the Ovary in a child twelve years of age, by Dr. Atherton.

Serious and Fatal Explosions.

During the month two accidents, attended with great loss of life, have occurred. The first accident was the explosion of a boiler whereby twenty-one persons were killed and thirty wounded. According to the finding of the jury it was caused by overpressure of steam due to the stop-valve being closed. The other accident occurred at the Spring Hill Coal Mines, Nova Scotia, an explosion resulting in the loss of 123 lives. The day preceding the accident an inspection of the mine had been made by the deputy inspector, as also by a committee of the miners, and found to be in good condition. Inspector Maddins, testing for fire damp, showed only in one instance the presence of one and two-fifths per cent., while other examinations showed its absence. The committee of miners reported the ventilation as all that could be desired, both in distribution and quantity; they, however, mention the fact of Nos. 6 and 7 balances, where the explosion occurred, as "very dry and dusty, and the air in a condition, from the quantity of dust floating about, to make it a source of danger." They reported this to be almost *nil* by "a system of waterworks with hose attached for sprinkling." The adjournment of the inquest until March 10th prevents the record of the finding of the jury—indeed, as yet no satisfactory reason has been advanced for this the most fatal accident in the history of our mining industry. The sympathy for the bereaved has been widespread, and found expression in contributions from private as well as public purses.

Leprosy in British Columbia.

Word has been received at Ottawa that this disease has been found among the Chinese in that province, and has been communicated to the Indians.

I notice with regret the death, in a western town of the province, of a medical practitioner while using chloroform, which at times he administered to himself. He was found with the chloroformed handkerchief over his face, no doubt having become anæsthetised.

March 12th.

Obituary.

RICHARD G. H. BUTCHER, M.D., F.R.C.S.I.,

OF DUBLIN.

AN able exponent of Irish surgery has passed away, Mr. Butcher, a most distinguished surgeon, having died on Saturday last at his suburban residence, Towerville, Sandymount, aged seventy-two. Owing to failing health he had for some years withdrawn from the practice of his profession, and had led a very retired life. The deceased was born at Killarney in April, 1819, being the third son of the late Admiral Butcher, and was educated at Cork and at the Peter-street School of Medicine, Dublin, and Guy's Hospital. He obtained the membership of the London College of Surgeons in 1838, and the licence of the Irish College three years afterwards, being coöpted a Fellow of the latter institution in 1844 The subject of this notice shortly after being qualified became a demonstrator of, and afterwards a lecturer on, anatomy in Peter-street School, and was elected surgeon to Mercer's Hospital; he was a member of the Council of the Royal College of Surgeons of Ireland, Examiner, and finally, in 1866, he obtained the Presidency. Upon his leaving Mercer's Hospital he joined Sir P. Dun's Hospital as lecturer on operative surgery. His practice was now a very large one, his reputation deservedly great, and honours and distinctions were showered upon him. The University of Dublin conferred the M.D. degree, *honoris causâ*; he was a honorary Fellow of the Philadelphia College of Physicians, and a member of the Royal Irish Academy, while his fame as a brilliant and successful surgeon went far beyond the limits of his own country. He was the inventor of the well-known Butcher's saw, which he first described in 1851, and of a splint for fractures of the femur. Mr. Butcher was a bold and skilful operator, and attracted large crowds to the hospital to which he was attached. In 1885, at the request of Sir Charles Cameron, he presented his valuable museum of surgical specimens to the Royal College of Surgeons of Ireland, a room having been constructed for the purpose by the late Mr. O'Reilly Dease, D.L. He published in 1865, in a large volume of 933 pages, his work on operative and conservative surgery, which was mainly composed of papers published at various periods in the *Dublin Journal of Medical Science*. A man of great muscular strength and striking physique, dark complexion, handsome features, and long curling black hair, he presented quite a foreign appearance, and some years since his face was one of the most familiar in the Irish capital.

Medical News.

UNIVERSITY OF OXFORD.—In a congregation held on the 21st inst. the degree of M.D. was conferred on

Frederick J. Smith, Balliol.

VICTORIA UNIVERSITY: FACULTY OF MEDICINE.—The following candidates have satisfied the Examiners in the examinations indicated:—

Second Examination.—First Division: *Hugh Ainsworth, E. L. Compston, R. S. Hardman, Percy McDougall, and *Peter Thompson, Owens College; Douglas Seaton and W. W. Stoney, Yorkshire College.—*Second Division:* Reginald Alcock, H. C. Cadman, D. H. Cheetham, E. A. Goulden, Edmund Harrison, Joseph Jones, Arthur Leigh, and G. M. Y. Whittingham, Owens College; S. H. House, E. S Miller, J. P. Nixon, and R. L. Wood, University College. (* Distinguished in Anatomy.)

Final Examination (Part I.).—G. F. Chadwick, J. G. Clegg, Samuel Crawshaw, A. J. Edwards, R. W. Marsden, Gruner Stowell, J. H. Taylor, J. H. L. Tylecote, W. H. Waddington, and W. B. Warrington, Owens College; Alfred Harris and S. R. Knight, University College.

Final Examination (Part II.).—*First Division:* H. A. Beaver, University College; William Griffith, Owens College.—*Second Division:* J. H. Bailey, W. J. Howarth, C. K. Rawes, and Frank Robinson, Owens College; S. H. Fairrie, University College.

UNIVERSITY OF CAMBRIDGE.—At Gonville and Caius College a Shuttleworth Scholarship open to medical students of the University of not less than eight terms' standing has been awarded to Francis Carr Bottomley, scholar of the college. The value of the scholarship is about £56 per annum, and it is tenable for three years, being given for proficiency in botany and comparative anatomy.

SUPERANNUATION GRANT. — Mr. Thos. Odell, M.R.C.S., lately medical officer of the second and third districts of the Hertford Union, has been granted a superannuation allowance of £50 per annum.

DONATIONS.—Mr. David Drummond, J.P., has given £200 to the building fund of the Royal Hospital for Incurables. Lord Iveagh has given £100 to the Coombe Lying-in Hospital, Dublin.

LEAMINGTON HOSPITAL EXTENSION.—Under the auspices of the provincial Grand Lodge of Ancient, Free, and Accepted Masons of Warwickshire, Lord Leigh, Lord-Lieutenant of the county, performed the ceremony, on the 18th inst., of laying the foundation stone of a new wing to the Warneford Hospital, Leamington. The estimated cost of this extension is £13,000.

VENTNOR CONSUMPTION HOSPITAL.—The annual meeting of the governors was held on the 21st inst., at 34, Craven-street, Charing-cross. The report presented stated that the whole of the 132 beds were constantly occupied during the past year, and 80 applicants were usually waiting for admission; 763 patients were treated. The income amounted to £10,383, and the expenditure, including £1769 for heating and ventilation works, to £11,344.

BOLTON INFIRMARY AND DISPENSARY.—The working of this institution continues satisfactory. The number of new cases admitted during the past year was 3783. The allotment of beds at convalescent hospitals by the Cotton Districts Convalescent Fund had been taken advantage of for patients requiring change of air, and 114 patients, against 97 last year, had been sent to these institutions. The total receipts amounted to £4514 17*s.* 2*d.*, and the disbursements to £5341 16*s.* 6*d.*, leaving a deficiency, to be taken from the donations, of £826 19*s.* 3*d.* Mr. William Slater, J.P. (Holmes, Dunscar), had presented to the institution a completely equipped horse ambulance.

CHILDREN'S HOSPITAL, BRISTOL.—The annual meeting (the twenty-eighth) was held on the 21st instant. Sir Charles Wathen, the Mayor, presided. The report, which was read, stated that the year commenced with an adverse balance of £445 10*s.* 10*d.*, and the income and expenditure in the year under review closed with a debit balance of £936 11*s.* 3*d.* The committee had sold out a portion of their investments, which realised £657 10*s.* 3*d.*, and had reduced the actual deficit to £279 1*s.* No less than 30,000 patients, or nearly 4000 more than last year, had been treated. Four cots had been added to the list of those which are either supported by annual subscriptions of £25 or by special contributions. The beds had been well occupied throughout the year, and the attendance of out-patients had been large.

THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA. The annual report (the twenty-fourth) is a gratifying record of the good work effected during the past year. The St. Gabriel's Hospital for Infants had been amalgamated with this institution, and twelve cots are specially set apart for infants under two years of age. 978 patients were treated in the course of the year, of whom 734 were discharged either cured or relieved, and the remainder sent out for specific reasons; 15,451 children were treated in the out-patients' department, and 209 cases were sent to the convalescent branch at Margate. The committee hope the new convalescent home at Broadstairs will be ready for occupation in the autumn. There was a balance at the banker's of £123 18*s.* 4*d.* A deficit of £141 15*s.* 3*d.* on the Margate Convalescent Home had been made up from the capital account.

THE NATIONAL ASSOCIATION OF SANITARY INSPECTORS (YORKSHIRE CENTRE). — A general meeting was held at Wakefield on the 21st inst. There was a large and fully representative attendance. Assembling at the Town Hall, the visitors proceeded to the West Riding Asylum, which they inspected, and expressed high satisfaction with all they had seen. On returning to the Town Hall, the chair was taken by Mr. D. Travis, Chief Sanitary Inspector, Halifax. A paper on "Modern Sanitary Legislation" was read by Mr. J. Maguire, Chief Sanitary Inspector, Huddersfield, and an interesting discussion followed; but the paper was considered so exceptionally important that its fuller discussion was reserved for the next quarterly meeting. A paper was afterwards read on the "Duties and Position of an Assistant Sanitary Inspector," and the meeting terminated.

THE Urban Sanitary Authority for Wokingham has decided to adopt the Infectious Diseases (Prevention) Act, 1890, and Part III. of the Public Health Acts (Amendment) Act, 1890. These Acts will come into operation on April 9th.

DISEASED MEAT.—A jobbing butcher, of Ringwood, Hampshire, was last week fined £30 and costs for sending two quarters of diseased beef to the London Central Market, intending it for sale as human food.

THE ANIMALS' INSTITUTE.—The council of this institute have decided to hold during the season a series of exhibitions of appliances used in the working of horses, with the object of lessening suffering amongst animals employed in traffic. Prizes will be given for the best collection of bits and of horse-shoes and other inventions coming under the head of harness. Those collections will be considered the best which are found to be the most humane and practical. The first exhibition will open on April 6th.

FIRE AT A LUNATIC ASYLUM, MONTREAL.—On Saturday a fire was discovered on the first floor of the extensive temporary buildings at Longue Pointe Lunatic Asylum, Montreal, which were erected to replace in some measure the loss of accommodation sustained by the terrible conflagration of a year ago. The flames spread rapidly, and four workmen on the fourth flat made a desperate leap to escape. They were all seriously injured. During the raging of the fire the lunatics in the adjoining buildings made frantic efforts to escape, and with difficulty the keepers kept them under restraint. The damage, which is estimated at 12,000 dols., is covered by insurance.

PRESENTATIONS.—On the 20th inst., at Westminster Medical School, Mr. James Black, lecturer on anatomy, was presented with a handsome marble clock, bearing an exquisitely worked plate, with the following inscription: "Presented to James Black, Esq., B.A., M.B., F.R.C.S., &c., as a token of esteem and gratitude from his anatomy class, Westminster Hospital, 1889-91."—At the close of a St. John Ambulance class at Huntingdon Mr. Oscar Jacobsen, M.R.C.S., L.R.C.P., was presented by the members with a handsome liqueur frame as a token of their appreciation of the trouble he had taken. All the candidates were successful in obtaining certificates.

ST. MARY'S HOSPITAL.—The general efficiency of this institution is maintained. Satisfactory progress has been made for extending the building and giving it a frontage in Praed-street. The work of the past year had been exceptionally heavy, the number of patients being in excess of any previous year. The Board direct special attention to the high encomiums recently passed upon the management by the Select Committee of the House of Lords. The expenditure amounted to £23,608, and but for the receipt of upwards of £8200 in legacies the resources of the charity would have been insufficient to meet the demands upon it. The total income only amounted to £22,344.

NORFOLK AND NORWICH HOSPITAL.—The annual report for the past year just issued shows that the number of in-patients (including those remaining in the hospital Jan. 1st last) was 1323. The number of out-patients (including 288 admitted originally as out-patients) was 4165. The total receipts (exclusive of legacies) was £7570 15*s.*, while the ordinary expenditure (exclusive of special items) was £7652 12*s.* 8*d.* The amount derived from legacies was £1453. The fees received from nurses' services in private nursing was £429 10*s.* 6*d.*, or £105 more than the previous year. An additional ward had been furnished, at an outlay of £177 17*s.* A sum of £500 had been invested in the public funds, and the balance to be carried forward amounted to £248 6*s.* 9*d.*

WORCESTER INFIRMARY.—The annual report for 1890 shows the increased usefulness of the charity. The number of in-patients admitted during the year was the highest recorded. The out-patients treated show a large addition on the previous year. In the course of the twelve months forty-nine patients had been sent to the St. John's Convalescent Home, Malvern, where beds had been provided by Mrs. Perrins. A Hospital Saturday collection had been made for the first time in the city, and £90 19*s.* 1*d.* was allotted to this infirmary. The cash statement shows a deficiency on the income of £865 5*s.* 11*d.* The invested property amounted to £48,583 16*s.* 4*d.* The committee contemplated selling out of the capital £1000 to meet the deficiency, but that was averted by Mr. Wheeley generously giving a cheque for that amount.

COMMITTAL OF AN ILLEGAL PRACTITIONER AT BIRMINGHAM.—Jesse Key, having failed to pay the penalties inflicted upon him for practising as an apothecary without being registered, was on the 12th inst. committed for forty days each on two summonses. This will doubtless give him time for reflection, and, though stating that his earnings were limited, and that he had a wife and eight children to support, he will probably think over some more profitable method of keeping them on his release from his present incarceration.

LONDON TEMPERANCE HOSPITAL.—The annual report for 1890 (which by altered arrangements only covers a period of nine months) shows that the in-patients were 753 during the year, of whom 390 were cured, 258 relieved, 60 unrelieved, and 45 died. The general statistical summary states that of the in-patients admitted since the opening of the hospital 3628 were abstainers and 3268 non-abstainers. The total expenditure for the nine months was £4415, and it had been necessary to transfer £1300 from the endowment fund, of which a balance still remained in hand of £6540.

MEDICAL NOTES IN PARLIAMENT.

The Consumption of Chlorodyne.

IN the House of Commons on the 21st inst. Mr. S. Smith asked the Secretary of State for the Home Department whether his attention had been drawn to the large consumption of chlorodyne, especially among women, and the grave evils which resulted from the practice; whether the fact of chlorodyne being a patent medicine and protected by a stamp exempted it from the operation of the Sale of Poisons Act; and whether the Government would take into consideration the expediency of classing chlorodyne with other narcotics, and only allow it to be sold under the same restrictions.—Mr. Matthews: I received last year a representation from a coroner's jury that some restriction should be placed on the sale of chlorodyne. I forwarded this representation to the Privy Council Office, which is the department concerned. The answer to the second paragraph depends upon the proper construction of sections 16 and 17 of the Act, to which I beg to refer the hon. member. Section 2 of the Pharmacy Act, 1868, prescribes the manner by which any article may be added to Schedule A of that Act—namely, by a resolution of the Council of the Pharmaceutical Society. The hon. member should address any representation to that Society in the first instance.

Baby Farming.

Mr. Channing asked the Home Secretary whether his attention had been called to the evidence in several recent baby-farming cases in which convictions had been obtained for manslaughter; whether it appeared that the children were largely obtained by means of advertisements in daily and weekly newspapers published in London and the provinces; and whether he would take into consideration the advisability of legislating with a view to control or prevent the insertion of such advertisements.—Mr. Matthews: I observe that the evidence in these cases shows that children are obtained by means of advertisement. I do not see my way to legislative interference with these advertisements, which do not invite to anything necessarily illegal. Neither the Infant Life Act of 1872, nor the amending Bill of last year, which was considered by a Select Committee of this House, proposed to control or prevent the insertion of such advertisements, which are, moreover, found by the police to be a useful clue to the whereabouts of the baby-farming establishments.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BAILEY, H. B., M.D. Brux., M.R.C.S., has been reappointed Medical Officer for the Spittlegate District of the Grantham Union.

BARWISE, SYDNEY, M.B. Lond., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health for the County of Derbyshire.

COLLINGWOOD, J. E., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer for the Burton-Coggles District of the Grantham Union.

COLMAN, WALTER TAWELL, M.R.C.S., L.S.A., has been appointed one of the Surgeons on the Staff of the Sherbourne-road Dispensary, Birmingham, vice F. W. Stokes, resigned.

DANIELL, G. H. S., M.B., B.C. Cantab., has been appointed House Surgeon to Guy's Hospital.

DUNN, R. A., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the North-Eastern Hospital for Children.

FAWCETT, J., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

FENTEM, P. S., M.D. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Baslow Urban District.

FOX, W. PIERCY, L.R.C.P., L.R.C.S., has been appointed Medical Officer to No. 12 District (New District), in addition to No. 6 District, in the Parish of Lambeth.

GORDON, H. LAING, M.B., Mast. Surg. Edin., has been appointed Medical Officer for the No. 6 District of the South Molton Union, Devonshire.

HARPER, C., L.R.C.P. Edin., M.R.C.S., has been reappointed Medical Officer of Health for the Bath Rural District.

HART, F. J. LORIMER, M.B., C.M., L.M. Edin., has been appointed Honorary Assistant Medical Officer to the Home and Infirmary for Sick Children and South London Dispensary for Women, Lower Sydenham, S.E., vice R. H. Gwynn, resigned.

HAYDON, W. R., M.D. Glasg., has been reappointed Medical Officer for the Cruwys Morchard District of the Tiverton Union.

HOCKRIDGE, T. GRANVILLE, M.D., M.R.C.S., L.S.A., has been appointed Medical Officer for the No. 6 District of the Holborn Union.

HODGE, W. T., M.R.C.S., has been appointed Medical Officer for the Ellesmere Union.

HOFFMEISTER, W., M.D. Heidelb., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer for West Cowes, Isle of Wight Union.

MACDONALD, C. R., M.D. Aberd., D.P.H. Camb., has been appointed Medical Officer of Health for the County of Ayrshire.

MACKINNON, NICOL, M.B. Aberd., has been appointed Medical Officer to the Parochial Board of South Uist, vice Maclachlan, resigned.

MCLAREN, ALICE J., M.B. Lond., has been appointed House Physician to the Leith Hospital.

MURDOCH, ANDREW, M.B., C.M. Glasg., has been reappointed Medical Officer for the Rainford District of the Prescot Union.

NASMYTH, T. G., M.D. Edin., D.Sc., has been appointed Medical Officer of Health for the County of Fife.

PLATT, JOHN EDWARD, M.D. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer of the Barnes Convalescent Hospital, Cheadle, vice E. C. Lomas, M.B., resigned.

RICHARDS, J. S., M.R., B.S. Lond., has been appointed Assistant House Physician to Guy's Hospital.

SCOTT, PATRICK CUMIN, B.A., M.B. Cantab., M.R.C.S., has been appointed Physician to the Miller Hospital.

SHEPHERD, R. F., M.B. Edin., has been appointed Medical Officer and Public Vaccinator for the Hainton District of the Boston Union.

SWAYNE, F. G., M.B., B.C. Cantab., has been appointed House Surgeon to Guy's Hospital.

WEBBER, H. W., M.B., B.S. Lond., has been appointed House Physician to Guy's Hospital.

WELSFORD, A. G., M.B., B.C. Camb., has been appointed Assistant Medical Officer for the Central London Sick Asylum District.

WILSON, HELEN M., M.B. Lond., has been appointed Resident Medical Officer to the Temperance Hospital, Hampstead-road.

WINSHIP, W. A., M.R.C.S., has been appointed Medical Officer for the Wetheral District of the Carlisle Union.

WORBOYS, T. S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Dispenser to the Union Infirmary, Leeds, vice Buck.

WORGER, T. H., M.R.C.S., has been reappointed Medical Officer of Health for Radstock.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BIRMINGHAM CITY ASYLUM, Rubery-hill, near Bromsgrove.—Clinical Assistant. Board, lodging, and washing will be provided.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and washing.

BURTON-ON-TRENT FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.—Junior Medical Officer. (Apply to the Secretary, Shobnall-road, Burton-on-Trent.)

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Surgeon.

COUNTIES OF MIDLOTHIAN, WEST LOTHIAN, AND PEEBLES, AND DISTRICTS WITHIN THE SAME.—Medical Officer. Salary £600, besides travelling expenses. (Apply to the County Clerk, County Buildings, Edinburgh.)

CHARING-CROSS HOSPITAL.—Surgical Registrar. Salary £40 per annum.

CHARING-CROSS HOSPITAL MEDICAL SCHOOL.—Demonstratorship of Physiology. Honorarium £100 per annum.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing.

DEACONESSES' INSTITUTION AND HOSPITAL, Tottenham.—Resident House Surgeon for one year. Salary £90 per annum, with board and residence.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

GUY'S HOSPITAL MEDICAL SCHOOL.—Two additional Anæsthetists for the Dental Department.

GENERAL HOSPITAL, Birmingham.—Honorary Physician.

HOLLOWAY SANATORIUM (HOSPITAL FOR THE INSANE).—Clinical Assistant. Board, lodging, washing, and small honorarium. (Apply to Dr. Rees Philipps, Virginia Water.)

KENT COUNTY ASYLUM, Chartham, near Canterbury.—Junior Assistant Medical Officer. Salary £125 per annum, with furnished apartments, board, and attendance. (Apply to Mr. Alien Fielding, Solicitor, Canterbury.)

LONDON LOCK HOSPITAL, Harrow-road, and 91, Dean-street, W.—Registrar.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician for one year. Salary at the rate of £60 per annum for the first six months, and at the rate of £70 per annum for the second six months.

PADDINGTON INFIRMARY.—Resident Clinical Assistant. Board, residence, and an honorarium of 12 guineas on completion of six months' satisfactory service. (Apply to the Medical Superintendent, 285, Harrow-road, W.)

QUEEN'S COLLEGE, Birmingham.—Co-professor of Medicine.

ROYAL VICTORIA PATRIOTIC ASYLUM FOR GIRLS, Wandsworth-common, S.W.—Medical Officer (non-resident). Salary £100 per annum. (Apply to the Secretary, Royal Commission Patriotic Fund, 53, Charing-cross, S.W.)

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W.—Milroy Lecturer.

STOCKPORT INFIRMARY.—Assistant to the House Surgeon for six months. Board and residence.

SALFORD UNION.—Assistant Medical Officer for the Union Infirmary, Hope, near Eccles. Salary £130 per annum, with furnished apartments in the Infirmary. (Apply to the Clerk to the Guardians, Union Offices, Eccles-new-road, Salford.)

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM.—Third Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BRUNTON.—On March 22nd, at Oatlands Park Hotel, Weybridge, the wife of T. Lauder Brunton, M.D., F.R.S., of 10, Stratford-place., W., of a son.

CUTFIELD.—On March 21st, at Merton House, Ross, Herefordshire, the wife of Arthur Cutfield, B.A., B.Sc., M.R.C.S., of a daughter.

DUKE.—On March 19th, at The Glen, Lewisham, S.E., the wife of John Challen Duke, M.R.C.S., of twin daughters.

FREER.—On March 15th, at Ormeside, Llandudno, the wife of E. Luke Freer, M.R.C.S., of a son.

LAKE.—On March 23rd, at Barnes, S.W., the wife of R. Lake, F.R.C.S., of a daughter.

LEGGATT.—On March 19th, at Elm-avenue, Nottingham, the wife of Gerard S. Leggatt, M.R.C.S., of a son.

ROBERTS.—On March 20th, at 261, Glossop-road, Sheffield, the wife of Sidney Roberts, M.A., M.B., B.C. Cantab., M.R.C.S., of a son.

MARRIAGE

DUNLOP—DUNCAN.—On March 19th, in St. Giles' Cathedral, Edinburgh, James Craufurd Dunlop, M.B., M.R.C.P.E., to Mary Isabella, elder daughter of J. M. Duncan, Advocate.

DEATHS.

BRUNTON.—On March 24th, at Oatlands Park Hotel, Weybridge, the infant son of T. Lauder Brunton., MD., F.R.S., of 10, Stratford-place, W.

DE LISLE.—On March 20th, at Hélouan, Cairo, Albert De Lisle, M.R.C.S., L.R.C.P., son of the late Albert De Lisle, of Teignmouth, aged 26.

FOWLER.—On March 15th, suddenly, George Fowler, F.R.C.P. Edin., of Clapham-road and Kennington-park-road, in his 57th year.

KERSHAW.—On March 21st, James E. Kershaw, M.A. and M.B. Oxon., Resident Medical Officer at Brompton Hospital for Consumption, only surviving son of the late James Kershaw, Esq., of Bowdon, Cheshire, aged 35.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC RECEIVED.

BLAKISTON, SON, & CO., Philadelphia; and H. K. LEWIS, Gower-street, London.

Text-book of Medical Jurisprudence and Toxicology. By John J. Reese, M.D. Third Edition, revised. 1891. pp. 666.

FANNIN & Co., Dublin; and BAILLIÈRE, TINDALL, & COX, London.

Transactions of the Royal Academy of Medicine in Ireland. Vol. VIII. 1890. pp. 535.

JENKINS, W. R., New York.

The Microbe has his Rights. By G. T. Chapman. 1891. pp. 86.

PENTLAND, YOUNG J., Edinburgh and London.

Botany: A Concise Manual for Students of Medicine and Science By Alex. Johnstone, F.G.S. Illustrated. 1891. pp. 260.

SWAN SONNENSCHEIN & Co., Paternoster-square, London.

Crime and its Causes. By Wm. Douglas Morrison. 1891. pp 236.

The New York State Reformatory in Elmira. By Alex. Winter, F.S.S. 1891. pp. 172.

An Introduction to the Study of Botany. By Edward Aveling, D.Sc. Lond. With Illustrations. 1891. pp. 383.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY, Hartford.

Transactions of the American Ophthalmological Society. Vol. V. 1888-1890.

The Thermometer in Obstetrics and Gynæcology; by A. D. Leith Napier, M.D., F.R.S. (A. K. Lewis, London, 1890); price 1s. 6d.—Klinische Beitrage zur Kenntniss der Acuten Miliartuberculose und Tuberculosen Meningitis; vorgelest von Dr. H. Reinhold (J. B. Hirschfeld, Leipzig, 1891). — The Strand Magazine, March, 1891; edited by Geo. Newnes (359, Burleigh-street, W.C.). — The Treatment of Chronic Tubercular Consumption; by G. C. Smith, M.D. (Austin, Texas).—New Method for the Analysis of Peptones; by A. Denaeyer (S. Straker and Sons, London, 1891).—La Neurasthénie: Maladie de Beard; par le Dr. Fernand Levillain (A. Maloine, Paris, 1891). — Index Medicus, Authors and Subjects, Vol. XIII., No. 2, February, 1891 (Trübner and Co., and Lewis, London). — Die Tetanie; von Dr. Med. Lothar v. Frankl-Hochwart (August Hirschwald, Berlin, 1891). — Magazines for April: Leisure Hour, Sunday at Home, Good Words, Sunday Magazine, Boys' Own Paper, Girls' Own Paper.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 25th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 19	29·85	N.E.	41	38	59	46	37	..	Cloudy
,, 20	29·80	N.W.	38	36	73	47	35	..	Cloudy
,, 21	29·84	N.E.	38	36	73	44	34	..	Cloudy
,, 22	30·05	N.W.	33	..	71	45	29	·04	Bright
,, 23	30·07	S.W.	35	33	65	44	33	·01	Snowing
,, 24	29·91	S.W.	42	40	83	52	35	..	Cloudy
,, 25	29·72	S.W.	49	47	92	54	41	·01	Cloudy

Medical Diary for the ensuing Week.

Monday, March 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

Tuesday, March 31.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

Wednesday, April 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens by Mr. Targett, Mr. Alban Doran, Dr. W. Duncan, and others. Mr. John W. Taylor: Case of Extra-uterine Pregnancy at full term; removal of child and placenta by abdominal section; recovery.—Dr. W. S. A. Griffith: (1) Case of Obstructed Labour in which a large Fibroma was mistaken for the Head of an Extra-uterine Fœtus; (2) Case of Extra-uterine Gestation, the Sac being situated in the Right Broad Ligament; Pregnancy advanced to the early part of the fourth month.—Mr. Marmaduke Sheild: Case of Extra-uterine Gestation associated with Sloughing of the Abdominal Wall, and attempted Extrusion of a matured and putrid Fœtus near the Umbilicus.

Thursday, April 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Guthrie: A case of Post-hemiplegic Spasm.—Dr. Seymour Taylor: On Bradycardia, the Slow Heart.

Friday, April 3.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL (Fulham-road, S.W.).—4 P.M. Mr. W. H. Elam: Malignant Disease of Breast.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Mr. Percy Dunn will show some Pathological Specimens. Dr. Alderson: A case of Attempted Suicide by Chloroform.—Mr. S. Edwards: Observations on Lithotrity, with a series of forty cases.

Saturday, April 4.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

MR. MANSELL-MOULLIN'S "SURGERY."

WE have received from Messrs. J. & A. Churchill a copy of a fresh list of illustrations to the above work, with the intimation that it is intended to replace the list included in the copy which has been sent out for review. We observe that to each of the borrowed illustrations the name of the author is now attached.

Sabac might apply to the Editor of the *Nursing Record*, published at St. Dunstan's House, Fetter-lane, London, E.C.

Eye Disease.—We have no knowledge of the gentleman mentioned.

CIVIL SERVICE INSURANCE SCHEME.

To the Editors of THE LANCET.

SIRS,—In your issue of the 21st inst. is reported a meeting of the Royal Academy of Medicine in Ireland, at which a paper was read by Dr. MacDowel Cosgrave in reference to the above scheme. The above reported meeting was held on Feb. 13th, 1891. I have before me a prospectus, dated Dec. 13th, 1890, which enacts as follows:—"On and after 1st January, 1891, every proposer for life insurance shall be required to sign the following declaration: 'I, ——, of ——, being desirous to become a member of the Civil Service Insurance Society, do hereby declare that I am at the present time occupied upon my usual official duties, and that I am, to the best of my knowledge and belief, at the present time in a good state of health.' In addition, a certificate appended to the declaration must be signed by two civil servants serving in the same department as the declarant, to the effect that he is at present engaged upon his usual duties, and is believed by them to be in a good state of health." In Dr. Cosgrave's paper, as reported, he states that the insurance is effected "without any declaration of health, and without any reference to friends." Perhaps the above extracts will induce him to correct his statement, and will also tend to modify Mr. Lentaigne's expressed opinion of uneasiness at what seemed to him (with Dr. Cosgrave's spectacles) "a very reckless and dangerous policy."

Perhaps the following facts may also conduce to the formation of a more accurate judgment on the merits of this special case. 1. All civil servants prior to appointment are subjected to a very extended medical examination; and the medical examiner is specially asked to give the benefit of any doubt he may have in regard to fitness for the service not to the individual, but to the State, and as a result only the best men are passed. 2. They enter the service young. 3. Their lives are in the main not devoted to laborious callings, mentally or physically. 4. Only five years must elapse between date of joining the service and date of insurance.

After taking into consideration all the above facts, I think it will be at once acknowledged that the conditions present in the lives of civil servants collectively will distinctly outweigh in their prospects of longevity those present in any first-class insurance office. While strongly defending the Civil Service Insurance Scheme—safeguarded as I believe it to be,—I would equally strongly deprecate what Dr. Cosgrave believes will follow its success—viz., the indiscriminate admission of lives without medical examination.

I am, Sirs, yours faithfully,

March 23rd, 1891. A MEDICAL CIVIL SERVANT.

CLAUSEN'S STOVE.

Mr. Campbell Hyslop and several other correspondents are referred to the inventor, M. de Clausen, 37, Fitzroy-square, W.

Professor Windle (Birmingham).—The matter will be treated fully in our next issue.

THE MEDICAL DEPARTMENT OF THE PERUVIAN ARMY.

THE *Crónica Médica* complains bitterly of the wretched condition of the medical department of the Peruvian army, and considers that much of the suffering endured by the latter during the late war with Chili is to be attributed to the want of proper organisation of the department. One serious defect is that of a medical school where military surgeons may be adequately trained for the important and special work they have to do.

Dr. Jno. Wyllie.—1. No.—2. The older qualification is perhaps the more esteemed, though the possession of a university degree is generally supposed to be accompanied by superior culture.

M.R.C.S.—THE LANCET of Nov. 20th, 1886.

THE GENERAL PRACTITIONERS' UNION.

To the Editors of THE LANCET.

SIRS,—I was very pleased to read in THE LANCET of March 7th that a Society has been formed under the above title for the protection of general practitioners. Now, the great evil that general practitioners have had to suffer from is the fact that they are only represented on the General Medical Council by three members, who, of course, are elected by a majority of medical men as being those most likely to press forward matters in which general practitioners are interested. But I beg to state that even these three gentlemen are not conversant with the trials and troubles of a general practitioner in a country practice in the northern counties.

Scattered thickly over the county of Durham are numerous villages owned by the various colliery proprietors, who each appoint a certain medical man as "colliery doctor" at a certain salary per annum, for which he has to attend all cases of accident which may happen to miners working in their pits. In addition to this, at most collieries the ordinary attendance upon the miners and their families, together with any medicines that may be required, is covered by the large sum of 6*d.* per fortnight for each family, no matter how many "workers" there may be, or how many persons may be ill at the same time, or over how long a period the illness may necessitate attendance and medicine. The only extra is a fee of 10*s.* 6*d.* for confinements, which does not vary whether the case is simple or if forceps or an operation may be needed. This fee includes attendance until the mother is well again, and usually vaccination of the child as well. I might mention here that the average pay of a miner in this county is £3 6*s.* per fortnight of eleven working days of six hours each. He also has house and coals free, and no rates or taxes. In my own case I have about 280 families to attend, which means a population of about 1400. This number at 6*d.* per fortnight for each family should bring in £182 per annum; but from this is deducted 10 per cent. for collector's commission (the custom of the district), which leaves £163 16*s.* net. Then there are about fifty confinements, bringing in £26 5*s.*—a total of £190 1*s.*, to cover an average of twenty-five visits per diem and medicine, which, excluding the confinements, means supplying persons with attendance at a rate of 4½*d.* per visit, and giving them the medicine gratis. If one speaks of raising the fees, one is met by the reply that Dr. So-and-so will attend for the old fee, and miners are so migratory a population that it matters little to them what doctor attends them so long as he can give the necessary certificate in case of death, and thus save an inquest. They may become pretty well attached to a man if he looks after them well and is possessed of a fair amount of skill; but even should the most popular man raise his fees, they would leave him almost *en masse* for the nearest man who is content with things as they stand.

There is also an element of unqualified practice to contend with. There are two unqualified practitioners in my district; but when I asked my qualified neighbours to unite with me in prosecuting them, I was told as regards one of them: "Let the poor old man go on in peace. He has been in practice here for over thirty years—before any qualified man was in the neighbourhood." I was also told that I should do myself more harm than good by interfering with him, which I really believe. This man puts "M.R.S." after his name, and thus deludes persons into believing he is qualified, and registrars accept his certificates.

The formation of a General Practitioners' Union which would put down unqualified practice, and also help a general practitioner towards raising the low standard of fees quoted above, so that he may have a fair recompense for his work, will be hailed with joy by the great mass of general practitioners, a large number of whom have their lines certainly not cast in pleasant places.

I am, Sirs, yours truly,

March 16th, 1891. GENERAL PRACTITIONER.

MACMUNN'S CASE SHEETS.

ANY plan which facilitates the record of cases seen by the busy practitioner is sure to be appreciated. The "Case Sheets" devised by Dr. MacMunn, and issued by Mr. Silverlock, seem to us to answer well all the requirements for the necessarily condensed form of note-taking that is alone possible under the conditions of private practice. Many will doubtless be glad of so convenient a method of keeping records of their patients.

F.R.C.S.—Our correspondent's letter on the risk of dispensary abuse shall be published next week.

VERRUGA PERUVIANA.

DR. PAGAZA recently brought before the Lima Medical Society, "Union Fernandina," a case of the peculiar Peruvian wart disease in which gangrene of the right leg occurred, which caused an embolus, resulting fatally.

D. D. D.—Our correspondent does not appear to have tried subnitrate of bismuth (ten-grain doses) every two or three hours. The liquor ferri pernitratis is often of some service.

Mr. J. Lawrence Newton (Sydney).—We regret we cannot answer the question.

CORONERS AND POST-MORTEM INSPECTORS.

To the Editors of THE LANCET.

SIRS,—Certain occurrences happened here a week ago which rendered it necessary that I should question the coroner's selection of a post-mortem inspector. A friendly and courteous correspondence ensued, which much impressed me with the gentlemanly demeanour of the coroner. During that correspondence, however, the coroner emphatically declared that the selection of a post-mortem inspector was, under every and any circumstance, at his unquestionable discretion—that is to say, any medical man in charge of a case eventually ending in a post-mortem examination and inquest may be quite ignored, passed over, slighted, and made give place to the coroner's nominee, the latter having no earthly connexion with the previous history of the case. Further, the coroner, as in the above instance, may be a lawyer, unable to judge of the fitness of his especial nominee for the work in hand. In fact, the said nominee may be practically and truly the inferior of the medical man whose place he takes. If this be law, it is a law constructed by an idiot. The discretion of any coroner in this matter should be open to revision. It is a discretion liable to grave abuse, and fraught with many annoyances to the medical man slighted. It is open to strong censure; for an ignorant public will judge that the doctor who supersedes is more intelligent than the one superseded. Cannot this law—if it be law—be abrogated, annulled, reinstated in the limbo of oblivion which probably holds its constructor?

I place the matter before my professional brethren, and await the enunciation of their opinions.—I am, Sirs, yours faithfully,

Moses Gate, March 25rd, 1891. W. B. BRODIE.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Bruce Clarke, London; Dr. Stevenson; Dr. Ed. Seaton; Dr. Theodore Williams, London; Dr. Herman, London; Mr. Kirkham; Mr. Hay Forbes, London; Professor Charteris, Glasgow; Mr. Brodie, Moses Gate; Mr. Lawton, Poole; Dr. W. White, Birmingham; Dr. Mortimer Granville, London; Dr. J. Barr; Mr. Howlett, Hull; Messrs. Keene and Ashwell, London; Dr. Vidal Solares, Barçelona; Messrs. Richardson and Co., Leicester; Prof. Windle, Birmingham; Mr. Hyslop, Church Stretton; Dr. Hekimian; Dr. G. Johnson, London; Messrs. Burgoyne and Co., London; Dr. W. T. Gairdner, Glasgow; Mr. Behnke, Earl's Court; Dr. V. D. Harris, London; Mr. Hawkes; Mr. Mann, Mile End; Mr. Pocock, Bangor; Dr. Kelso, Southsea; Dr. P. C. Larsen-Utke, Copenhagen; Mr. Low, London; Dr. Currie, Madras; Mr. A. Duke, Dublin; Mr. Tweedy, London; Dr. Grove, Wilts; Mr. H. M. Milton, Cairo; Mr. Bagshaw, Salford; Mr. Pearson, Cork; Dr. E. F. Neve, Kashmir; Mr. Mendelsohns, London; Mr. Mitchell, Washington, U.S.A.; Dr. Santini, Rome; Dr. Appiah, Bangalore; Mr. Gurner, Pall Mall; Dr. Wareman, Zanzibar; Messrs. Oppenheimer Bros. and Co., London; Mr. Gibson, Newcastle-on-Tyne; Messrs. Hertz and Collingwood, London; Dr. Moorhead, Notts; Messrs. Orridge and Co., London; Mr. McDonald, Gosport; Messrs. Wright, Dain, and Co., Birmingham; Messrs. Southall, Birmingham; Mr. Magruder, New Orleans; Mr. Freeman, London; Mr. Donelan; Dr. Phillips, Virginia Water; Mr. Mackenzie, London; Mr. Heaton, London; Messrs. Ross and Co., Belfast; Mrs. Learmonth, Canterbury; Messrs. McMillan and Co., London; Mr. Stranaghan, Pontypridd; Messrs. Mottershead and Co, Manchester; Mr. Hornibrook, London; Dr. Roberts, Sheffield; Mr. Little, London; Mr. Foskett, Dulwich; Dr. Coghill, Birmingham; Dr. Maunsell, Cardiff; Mr. Woodcock, Bradford; Mr. Le Fevre, Bedford; Mr. Vickers, London; Mr. Clifford, London; Mr. W. Rayner, Uxbridge; Dr. Stephenson, Aberdeen; Mr. Mahony, Liverpool; Mr. Eminson, Scotter; Mr. Cotman, London; Mr. Edwards, London; Mr. Maugan, London; Surgery, London; Prescriber; Thor; Sigma; Micros, London; Dispatch, London; Maltine Manufacturing Co., Bloomsbury; J. W. F.; M., London; Pulsometer Engineering Co., London; Medical Superintendent, Harrow-road; Sanitary Wood Wool Co., London; Owner, Lancs; Sabac; A Medical Civil Servant.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Leech, Bristol; Mr. Tully, Hastings; Mr. Moore, London; Messrs. Coxeter and Son, London; Mr. Heywood, Manchester; Mr. Dale, Market Drayton; Dr. Murrell, London; Mr. Ward, London; Messrs. Battle and Co., Paris; Mr. Chapman, Falmouth; Messrs. Brown, Gould, and Co., London; Mr. Treaise, Burton-on-Trent; Messrs. Blondeau et Cie., London; Dr. Diver, University College Hospital; Messrs. Bush and Son, Sheffield; Mr. Lockwood, Huddersfield; Messrs. Brady and Martin, Newcastle-on-Tyne; Dr. Scriven, Duffield; Messrs. Allen and Wilson, Indianapolis; Mr. Hutchinson, Belfast; Mr. Roberts, Sheffield; Dr. Deane, Ellesmere; Mr. Coombes, Bridgwater; Mr. Bissett, Aberdeen; Dr. Fletcher, Highbury; Dr. Hinde, Banbury; Mr. Tyte, Minchinhampton; Mr. Heywood, Nottingham; Mr. Huish, Lordship-land; Mr. Taylor, Ventnor; Mr. Russell, Liverpool; Mr. Shavaksha Sorabji, Hyderabad; Dr. Cheesewright, Rawmarsh; Messrs. Godfrey and Cooke, London; Mr. Roworth, Grays, Essex; Dr. Adams, West Malling; Mr. Lee, Bath; Mr. Arkle, Teignmouth; Messrs. Cooper and Morris, Ross; Mr. Edwards, Bridgend; Messrs. Ponsford and Co., Taunton; Mr. Mechan, Erith; Mr. Evans, Bradford; Chichester Infirmary; Alphabet; Alpha, Brighton; Phœnix, London; Devon and Exeter Hospital; G. W. C., London; Sussex, London; Portsmouth Lunatic Asylum; Wanderer, London; Churchman, London; County Asylum, Prestwich; P. A., London; Hercules; Secretary, Southern Hospital, Manchester; F. J. D., London; Lupus, London; Cantab, London; Lake, London; Superintendent, Newcastle-on-Tyne; M., Birmingham; Smilax, London; Mercury, London; Medicus, Scarborough; Genuine, London; Student, London; M.D., London; M.A., Croydon; R. M., Sidmouth; Miss X., Manchester; Forceps, Accrington; Dunelm London; Nurse, Sheffield.

NEWSPAPERS.—*Montreal Star, New York Herald, Long Eaton Advertiser Liverpool Daily Post, Scottish Leader, Builder, Leeds Mercury, Sunday Times, Bristol Mercury, Yorkshire Post, Broad Arrow, West Middlesex Gazette, Chemist and Druggist, Army and Navy Gazette, Metropolitan, Law Journal, Spectator, Pharmaceutical Journal, City Press, Surrey Advertiser, Guy's Hospital Gazette, West Middlesex Advertiser, Saturday Review, Mining Journal, Birmingham Daily Gazette, Insurance Record, Hertfordshire Mercury, Windsor and Eton Express, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, The Newspaper, Electrical Engineer, Englishman (Calcutta), Windsor and Eton Gazette, Cork Constitution, Pioneer (Allahabad), Morning Post, Le Temps (Paris), Scotsman, Banbury Guardian, Manchester Examiner, North British Daily Mail, Sheffield Independent, Western Mail, Manchester City News, Essex County Chronicle, Erith Times, Northampton Mercury, Bath Gazette, Lowestoft Journal, Devizes Gazette, Doncaster Chronicle, Labour World, Kentish Gazette, Confectioners' Union, &c.*, have been received.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris